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**THE RHODE ISLAND MEDICAL SOCIETY
THE RHODE ISLAND DENTAL SOCIETY
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BRONCHIECTASIS*

U. E. ZAMBARANO, M.D.

The Author. U. E. Zambarano, M.D. of Wallum Lake, R. I. Superintendent, Rhode Island State Sanatorium.

BRONCHIECTASIS as a pathological and clinical entity has been known for a long time. Laennec described it morphologically in 1819. The discovery of the bronchoscope and the later use of iodized oil for outlining the bronchial tree have made its recognition easier. Recent improvements in the technique of bronchography and better radiographic apparatus make bronchiectasis rather simple to diagnose.

The advent of mass x-raying in pre-induction examinations, in industry and among apparently healthy individuals, has also increased interest in this condition and many previously unknown cases of bronchiectasis have been uncovered. Among admissions to station hospitals for respiratory ailments as many as one and a half to two percent were found to be suffering from bronchiectasis. In some of these individuals it was found in as short a time as six months after induction although pre-induction films showed no evidence that the condition might be present.

More than half of the patients date the onset of their illness back to childhood although the majority are not recognized until much later in life, most commonly between the ages of 20 and 30.

It might be congenital or acquired. Dilated bronchi have been found in the embryo and among the newborn. Individuals with dextrocardia have a high incidence of bronchiectasis. This has been explained as due to bronchial ectasia from maldevelopment. Infection occurs later and the true picture of clinical bronchiectasis is seen.

In the presence of recurrent or persistent bronchial infection there is atrophy, desquamation and destruction of the muscular and elastic layers of the bronchi. Due to loss of supporting tissue the bronchial wall is weakened and dilatation follows. As fibrosis occurs respiratory movements make traction on the weakened bronchial wall and further

dilatation occurs. The symptoms ascribed to this condition arise when there is infection of the dilated bronchi. Secretions tend to collect in pools, infection takes place, and a vicious cycle ensues. Bronchial dilatation may result from obstruction and atelectasis. As the infection proceeds the lung parenchyma may be invaded leading to interstitial pneumonia, pneumonitis, pulmonary abscess, extensive lung suppuration, gangrene, and empyema.

Two general types of bronchiectasis are recognized—the cylindrical and saccular. The two forms may coexist with one or the other predominating. There are also numerous variations of each type.

Predisposing Causes

The predisposing causes of bronchiectasis are many but they all have the tendency to produce obstruction or atelectasis which leads to bronchial dilatation. Some of the common causes are:—chronic recurrent bronchopneumonia especially in childhood, chronic tracheobronchitis, chronic bronchitis, influenzal pneumonia, pneumonia complicating whooping cough, foreign bodies, aspiration lung abscess, chronic paranasal sinusitis. In one series, about 35 percent of those with bronchiectasis gave a history of para-nasal disease. Some believe that sinusitis may follow bronchiectasis. Allergy has all the factors necessary for producing bronchiectasis. Over half of the cases of bronchiectasis can be traced to a previous respiratory illness.

Bronchial obstruction may lead to bronchiectasis. Intrabronchial obstruction may result from aspiration of a foreign body, from broncholiths, and from occluding secretions as in postoperative atelectasis and pneumonia. Bronchial obstruction may be congenital or follow stricture from a foreign body, scar tissue with contraction as in syphilis and tuberculosis, or tumor. Peribronchial obstruction may result from enlarged tracheobronchial lymph nodes, mediastinal tumor, aneurysm, and pulmonary fibrosis.

Some investigators have found as high as sixty-one percent bronchiectasis in tuberculous patients. Tuberculous bronchiectatics do not have marked

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*Presented at the meeting of the Providence Medical Association, at Providence, December 4, 1944.

clubbing of the fingers. The sputum may be copious but is seldom foul. The bronchogram shows marked distortion of the bronchial tree in addition to the dilatations of the bronchi. The present belief seems to be that suppurative bronchiectasis does not develop in a tuberculous patient unless the symptoms were present while the patient was under treatment for active tuberculosis. The disease is usually diagnosed in these patients when the sputum persists after the tuberculous lesion has healed and the sputum has been converted.

All lobes may be involved in bronchiectasis, singly or combined, unilaterally or bilaterally. It is seen more commonly, however, in the left lower lobe. Drainage from this lobe is not as efficient as it is from the right lower lobe. On the right side the main bronchus is a direct continuation of the trachea. The left main bronchus is narrower than the right and there is a constriction of the left bronchus where it is crossed by the pulmonary artery.

Common Symptoms

The symptoms commonly ascribed to this disease are those of a far advanced process with severe infection. Chronic cough is the most common symptom. In most instances there is a history of cough dating back many years to a severe respiratory illness. Expectoration varies in amount and character. In advanced cases it is copious, purulent and foul. Blood spitting occurs in about fifty percent of the cases and in some instances it may be the only symptom for which the patient presents himself. This type characterized by occasional episodes of hemoptysis has been called "dry bronchiectasis". Fever, night sweats, dyspnea, loss of weight, etc. are usually due to inadequate drainage and toxemia. Clubbing of the fingers is seen in advanced cases. Cardiac symptoms may appear in the presence of extensive pulmonary fibrosis.

The physical signs are not particularly significant and are often negligible even in the presence of extensive involvement. Dullness with diminished breath sounds may be present over the involved areas. Grouped rales in the bases are sometimes heard. The vital capacity is reduced in advanced disease.

There are no specific organisms in bronchiectasis. Bacteriological studies usually reveal mixed infection. Fusospirochetes or anaerobes are sometimes found in fetid secretions.

The complications of bronchiectasis are due to extension of the disease in undiagnosed and untreated cases. These are:—severe hemorrhage, disseminated suppurative bronchopneumonia, lung abscess, empyema and gangrene. Amyloidosis may occur in long standing cases.

The x-ray findings vary a great deal. Here again it is only in advanced disease that we can safely

make a diagnosis on the simple conventional film. Bronchiectasis may be suspected if there are prominent markings in the basal or peripheral lung fields. Markings may be accentuated just above the diaphragm or costo phrenic angle. Areas of mottled infiltration or honeycombing in the base of the lung are suggestive. Localized areas of atelectasis should lead to the suspicion of bronchiectasis. Foreign bodies should be carefully looked for. The possibility of disease lurking behind the heart shadow should not be overlooked.

A well made bronchogram is the only absolute method for making an accurate diagnosis of bronchiectasis. The instillation of iodized oil into the bronchial tree will give all the information necessary for proper evaluation of the case. Bronchi of both lungs must be outlined. This is important before proper treatment can be instituted. By this method we may learn the extent and type of bronchiectasis to be dealt with. In tuberculous patients a non-iodized oil is used since iodized oil may be harmful to tuberculous lesions. The techniques used for instilling the oil are many and varied. It is perhaps wise to have the procedure done by those experienced in this work. The important thing is to have it done early.

Bronchoscopy is another useful procedure in the diagnosis of bronchiectasis. It is of undoubted value in all chest diagnoses and it is gradually becoming routine in all chest conditions.

Since there are no really pathognomonic signs or symptoms in bronchiectasis, it is good sense to keep this condition in mind when a patient is seen with suspicious symptoms referable to the chest. The most common conditions encountered in patients with chronic cough, hemoptysis and expectoration are:—TUBERCULOSIS, BRONCHIECTASIS, LUNG ABSCESS, CARCINOMA AND FOREIGN BODY. In all such cases let us get a good chest x-ray, make careful sputum studies, do bronchograms and bronchoscopy. If this routine is followed in every case few diagnoses will be missed. It might not be amiss at this point to recommend that a chest x-ray be made part of all routine physical examinations.

The prognosis in untreated bronchiectasis is generally poor. Twenty-five to forty percent die of complications. In one series 50% died of pneumonia, 10% of pulmonary abscess and gangrene, 10% of associated tuberculosis and 5% from severe hemorrhage. Bronchiectasis is a most distressing disease and individuals so afflicted suffer more than with any other chronic chest condition.

The medical treatment of bronchiectasis is most frequently only palliative and rarely curative. In far advanced cases this is all that can be offered. Postural drainage is helpful in ridding patients of noxious secretions. This is best done at night and

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TECHNIQUE OF BRONCHOGRAPHY*

BERT H. COTTON, M.D.

The Author. *Bert H. Cotton, M.D., of Boston, Massachusetts.*

REFINEMENTS in the technique of thoracic surgery during the past decade have established lobectomy or pneumonectomy as the ideal treatment for bronchiectasis. Dramatically successful though these procedures may be, they place a heavy responsibility on the physician and surgeon recommending them. Bronchiectasis can be cured only by the extirpation of all the involved tissue and since it is often impossible to be certain of the extent of the disease during operation, it is imperative to determine its exact location as a preliminary to surgery. The only reliable method of determining the extent of bronchiectasis consists of mapping out the entire bronchial tree by means of a radiopaque oil.

Technique of Bronchography

The introduction of iodized oil by the present day methods accomplishes two purposes. (1) It makes an accurate clinical diagnosis and (2) a detailed anatomical map of the bronchial tree is made. From this geographical guide the operation is planned by the thoracic surgeon. Essential to the success of this method are: (1) the routine institution of postural drainage as an immediate preliminary to bronchography, (2) protection from local anesthesia (cocaine, etcetera) reactions by pre-operative barbiturates, and (3) atropine, 1/75 grain to dry up secretions.

This method requires that the throat be thoroughly anesthetized. A dilute solution of the anesthetic is dripped between the vocal cords. A small urethral catheter is inserted into the trachea. The patient is placed on a fluoroscopy tilt-table with the head of the table elevated to a 45 degree angle. A catheter is inserted in the left bronchus and the patient is placed in the left posterior oblique position to fill the posterior branches of the upper and lower lobes. The next position is the left lateral which completely fills the upper lobe bronchus. Immediately following is the face down position to fill the lingula of the left upper lobe and the anterior branches of the lower lobe. The catheter is then inserted into the right bronchus and the patient is

placed first in the right posterior oblique position, second in the right lateral and third in the face down position to fill the middle lobe. The amount of oil used should average 10-15 c.c. Certainly never more than 20 c.c. should be used. X-rays should consist of a regular P.A., a 25 degree left anterior oblique and a 25 degree right anterior oblique, a combination which will show every branch. We believe that the simplicity, rapidity, accuracy, and relative slight inconvenience to the patient will recommend this method to physicians.

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upon arising in the morning. Drugs such as codeine and cough mixtures help in alleviating cough and promoting expectoration. Creosote preparations have been used when the breath is foul and the secretions fetid. Supportive measures help in maintaining good nutrition. Autogenous vaccines are still used with varying results and perhaps worth trying. Chemotherapy has not yet proved of great value. Penicillin has not been used extensively enough to draw any valid conclusions. In the presence of gram positive organisms it may be of help especially, in preparing patients for surgery, by cutting infection down to a minimum and removing toxemia. The ectatic defect may then be treated surgically. Surgery has definitely improved the prognosis of bronchiectasis. Many cases have been cured. It is important to find these cases as early as possible and then turn them over to the surgeon because he definitely has something to offer.

The clinical material for this study was obtained from the State Sanatorium at Wallum Lake and the Belmont Hospital, Worcester, Mass., through the courtesy of Huston Spangler, M.D. and Arthur Ward, M.D.

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PROGRESS IN SURGICAL MANAGEMENT OF BRONCHIECTASIS*

RICHARD H. OVERHOLT, M.D.

The Author, Richard H. Overholt, M.D., of Boston, Massachusetts. Attending Thoracic Surgeon, Rhode Island State Sanatorium.

PROFOUNDLY disagreeable symptoms, periodic incapacitation, progressive disease and eventual early death for a significant number of patients suffering from suppurative bronchiectasis has presented a challenge to thoracic surgeons for many years. In fact, the plight of the patient has been so pathetic, the risk of the disease so grave that bronchiectasis was one of two pulmonary diseases to be considered for treatment by excision early in the history of thoracic surgery, the other condition being cancer.

In Graham, Singer and Ballou's "Surgical Diseases of the Chest"*** an account of reported cases treated by lobectomy up to that time is given. Sixteen operations were reported prior to 1914 with an operative mortality of approximately 50%. Between 1914 and 1935, one hundred ninety-six operations were done with a mortality rate of 34%. Complications in those that survived the operation were frequent. Infection of the pleural space was the rule and broncho-pleural fistulae were common. Difficulties in expansion of the remaining lobe and post-operative pneumonia were frequently encountered. Although this collected experience brings the record up to a period of ten years ago it does not represent the modern thoracic surgical approach to the problem. A number of factors have been introduced which have brought the risk of surgical treatment down to a reasonably safe level. Some of these developments include:

1) Greater precision in mapping out the bronchial pattern with lipiodol has provided the surgeon with a more precise plan for resection. Incomplete or basal bronchial filling may establish the diagnosis of bronchiectasis, but yields inadequate information for a satisfactory plan of resection. It is possible to direct the radio opaque oil through a catheter into each major bronchus and then direct its flow into the divisional bronchi of any pulmonary segment. This is done under fluoroscopic guidance. Spot photography and various positional films aid in proper identification of all branches of the bronchial system.

***Lea & Febiger, Philadelphia, Pennsylvania, 1935.

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2) Refinement in anesthetic management has reduced operative hazards and has lowered the incidence of spillover of infected material into uninvolved portions of lung. The anesthetist today has learned to intubate patients for thoracic surgery without trauma and to carry them under an even plane of anesthesia during the operation. At the same time he is able to carry out intrabronchial aspiration of secretions and maintain varying degrees of positive pressure at will. At the conclusion of the operation the importance of a rapid awakening from the anesthesia and a return of the cough reflex is recognized.

3) The individual treatment of hilar structures and the abandonment of the use of the lung tourniquet has been the greatest single advance in the technical performance of lobectomy during the past five years. A dissection of the primary or secondary hilum is possible in almost all cases. This permits the separate ligation of the pulmonary artery, pulmonary vein and bronchus of each segment. The bronchus can then be meticulously closed and reinforced with a flap of endothoracic fascia and pleura. This has practically eliminated fistula formation.

4) Intercostal nerve block, (nupercaine in oil) and a type of reconstruction of the chest wall to minimize discomfort and pain in the post-operative period aids in re-expansion of the remaining pulmonary lobe and has shortened the convalescent period.

5) Chemotherapy before, during and after thoracic operations has also contributed to the reduction in operative risk and of complications. The pre-operative use of a sulfa compound or penicillin has helped those patients who are suffering from a well-established suppurative process by reducing the amount of bronchial secretion and improving them generally prior to the application of surgery. The local application of the drug in the lobectomy space has lessened the incidence of empyema. Post-operatively chemotherapy has been a big help in those patients threatened with post-operative pneumonia.

6) Tracheal and bronchial aspirations by means of a catheter passed through the nose as a routine procedure in all patients having difficulty raising secretion has done much to lessen the pulmonary complications following lobectomy. The attend-

ing nurse can be instructed in this very useful procedure so that it can be done as frequently as necessary and in this way eliminate the necessity for post-operative bronchoscopic aspiration of the tracheobronchial tree.

Advantages of These Refinements

All of these refinements have not only made the operation much safer, but have resulted in a better planned and executed operation in respect to total removal of the involved pulmonary segments and conservation of healthy segments. For example, the lower branch bronchus or lingula of the left upper lobe is frequently found to be involved in disease with or without involvement of the left lower lobe. The individual ligation technique permits separate treatment and excision of the lingula. At times it is desirable to resect only the basal segment of a lower lobe conserving the superior third of the lobe or so-called dorsal segment. Bilateral operations are also possible and occasionally indicated if progressive disease is to be checked and health restored. In our own experience in treating 202 patients by lobectomy for bronchiectasis segmental resections were performed 37 times, (30 lingulectomies, and 7 basal segmental resections). Bilateral lobectomy has been performed nine times.

Refinements in technique have also reflected in a lower incidence of complications. For example, in single lobe resections the incidence of post-operative empyema has dropped to 3% and the occurrence of fistula to 1.4%. In the treatment of multiple lobes or segments the incidence of empyema has been reduced to 23% and the incidence of fistula to 8%. The operative mortality in the past five years with 125 cases has been 1.2% for lobectomy, and 11% for pneumonectomy. The average hospital stay for patients undergoing lobectomy uncomplicated by an empyema has been 18 to 21 days.

A sufficient period of time has now elapsed to appraise fairly the status of the post-lobectomy patient. Patients with multilobar disease are often greatly improved by the removal of the diseased segments on one side, for usually one of the basal segments acts as a principle reservoir of septic bronchial secretions. The impetus given to improved general resistance and the diminution in the degree of intrabronchial flooding often will, over a period of time, result in a gradual clearing of symptoms. The process in the contralateral lung has at times improved enough to indicate a reversible tendency in certain patients with bilateral bronchiectasis. In many cases health can be restored to a reasonable degree without the necessity of completing a bilateral resection.

Patients with well-localized or single lobe disease may count on complete relief of all symptoms.

In fact, the transformation is usually dramatic. Immediately the patient realizes several things. The toxic burden has suddenly disappeared. Sleep is not interrupted by paroxysms of cough. A sputum box or a supply of paper handkerchiefs are no longer needed. The self-consciousness concerning all of the distasteful aspects of the disease vanishes. There are personality changes and social relationships improve. If it were possible to compare the benefits that accrue from the surgical therapy of all diseases, lobectomy for the properly selected bronchiectatic patient would be well near the top of the list.

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APRIL MEDICAL MEETING

At the meeting of the Providence Medical Association to be held at the Medical Library on MONDAY, APRIL 2, at 8:30 P. M., Dr. C. A. Mills of Cincinnati, Ohio, will speak on

"THE MEDICAL ASPECTS OF AIR POLLUTION"

The Association is preparing to promote a program of study and action in the hope of improving the air within which the citizens of Providence live. It is desirable that members be well informed on this timely subject. The Committee on Air Pollution is bringing Dr. Mills here as a part of this program. Dr. Mills has long been interested in the subject and has published studies that are of much value. He has been active in a similar program in his own city. He is Professor of Medical Research at the Medical College of the University of Cincinnati and physician on the medical service of the Cincinnati General Hospital.

LABORERS' BACKACHES*

HENRY McCUSKER, M.D.

The Author, Henry McCusker, M.D., of Providence. Visiting Orthopedic and Fracture Surgeon, Rhode Island Hospital; Chief, Orthopedic Service, Homeopathic Hospital.

As physicians to a group which specializes in hard labor, you will be called upon to treat many Seabees with backaches. In all likelihood your ministrations will be required under the most adverse circumstances—often far removed from the refinements of modern hospital armamentarium. Even under ideal conditions in civilian life the proper evaluation of back pains has always been a vexing problem for the orthopedic surgeon. Today with workmen's compensation, sickness premiums, "lump-sum" settlements, and other awards, laborers' backaches have assumed increased importance from the medical-legal and economic standpoints. The subject is far too complex to encompass in this short talk, so we shall limit ourselves to a practical approach to the problem, eliminating debatable theories, such as pathological anatomy, etc. To simplify the discussion we may divide these cases into two major groups.

I. Low Back Pains without Leg Pains

This group represents the myriad of cases of so-called "Low Back Sprains", and includes the sacro-iliac sprains, lumbo-sacral sprains, myalgias of low-back muscle groups, occupational back strains, and backaches of postural origin. In order to treat properly a patient complaining of pains and aches in the lower back it is necessary to determine the basis of his complaints. There are certain diagnostic tests with which no doubt you were once familiar but which you may have had no occasion to use for a long period and therefore may have forgotten their significance—and so at the risk of appearing elementary or didactic I shall review briefly some of these clinical tests.

(a) Posture and physical makeup. It is important to note whether the patient is of the short squat type, or of the long, lean, ptotic type, and whether the back muscles are well developed or weak. Shoulder levels, tilting of the pelvis and other aberrations of body posture should be noted. Of particular importance is any increase in the

dorsal or lumbar physiological curves—since this postural defect alone is sufficient to initiate backache, or to prolong backache induced by injury. Especially is this true of lumbar lordosis with a sagging, lax abdomen.

(b) Back bendings. On forward bending a normal person should be able to bend forward (with his knees extended) to within two or three inches of the floor. During this maneuver it is important to watch for any tendency of the trunk to deviate from the vertical plane (in sacro-iliac sprains there is often inclination *away* from the involved side). Lateral bending toward the left and toward the right should be equal in range. Limitation often signifies pathology on the side opposite the bend.

(c) Straight-leg raising. Normally the average patient (in the supine position) should be able to bring his leg through an arc of 90 degrees. Any pain arising in the back, or if the knee starts to bend before 90 degrees is reached is abnormal. For practical purposes we consider that straight-leg raising to 30 degrees or less suggests a sacro-iliac disturbance; between 30 degrees and 90 degrees indicates a lumbo-sacral cause of the limitation. Parenthetically, it should be remembered that the differential diagnosis between a lumbo-sacral sprain and a sacro-iliac sprain is of more than academic interest because effective treatment of these two conditions differs considerably.

(d) Hyperextension at the hips (with the patient in prone position) should normally be through an arc of 35 degrees, and should be equal at the right and left hips. This test will often help in determining the presence or intensity of a sacro-iliac disturbance, or it may exaggerate the pain in lumbo-sacral disease.

(e) Lasegue sign. With the patient supine on the examining table, the thigh is flexed to 90 degrees on the pelvis. If the leg cannot be extended at the knee, or is painful, the test is positive for sciatic nerve involvement. This test may be amplified by forcible passive dorsiflexion of the foot at the ankle at the time when pain begins in the Lasegue test above. These tests depend upon stretching of the sciatic nerve which is normally not sensitive to such stretching.

(f) In many cases where the clinical findings are confusing, it is necessary to have a thorough

*Presented at the Medical Meeting at U. S. Naval Construction Training Center, Davisville, R. I., on December 21, 1944, under the sponsorship of the New England Committee for Wartime Graduate Medical Meetings.

X-ray examination of the lower spine and of the sacro-iliac regions. Since such an examination requires considerable skill and special techniques it is best done by a roentgenologist. We are then able to determine the presence and extent of diseases (like osteoarthritis) and of congenital anomalies (such as spondylolisthesis, aberrations of the articular facets, spina bifida occulta, etc.).

Treatment of low Back Pain — without Sciatica

(1) Correction of postural defects both in feet and in back, and posture exercises to strengthen weak musculature.

(2) Back strapping must be adequate, that is, it must be properly applied and cover a sufficient area to be effective. As you know, adhesive strapping in itself has no inherent power to relieve back pain, its function being entirely mechanical as a supportive agent.

(3) Local heat in the form of radiant heat, deep therapy, or diathermy is useful for the relief of pain especially in the chronic type of backache. Unfortunately this form of treatment has been much abused by the cultists and by some men in the medical profession.

(4) Salicylates and sedatives have a proper place in the treatment of back pains and sleeplessness due to these pains.

(5) Many patients can be made more comfortable by keeping them ambulatory, but if bed rest is imperative it should be on a hard mattress.

(6) Sacro-iliac belts and back braces are often necessary to effect a cure and to prevent recurrences. Incidentally, a low back belt often will make little or no impression on symptoms due to lumbar disease where a back brace is indicated.

II. Low Back Pains with Sciatica

Sciatica is a very much misused term to cover any leg pain. Often the neuritic pain radiates over the pathway of the lumbo-sacral plexus.

In severe cases the pain is in the buttocks, over the antero-lateral and postero-lateral aspects of the thigh, along the antero-lateral portion of the lower leg, and over the dorsum of the foot. In some cases the most severe pain is in the popliteal space or at the great sciatic notch.

Other symptoms and signs include:

- a. Limitation of motion in the lumbar segment of the spine.
- b. Tilting of the trunk *away* from the affected side.
- c. Spasm of the Erector Spinal Muscles, especially in muscular patients.
- d. Limitation of straight-leg raising on the affected side.
- e. The Lasegue sign is positive and painful on the affected side.

The most common causes of low-back pain with radiating leg pains are:

1. Arthritis of the spine and sacro-iliac joints.
2. Postural defects.
3. Congenital anomalies, especially in the lumbo-sacral area.
4. Exposure to extremes of climate.
5. Focus of infection, especially teeth.
6. Fatigue and trauma. This trauma may be direct or by leverage, and it may be a single trauma or repeated minor injuries.

Treatment here as in all pathological conditions is predicated on the severity and the probable underlying cause. In general, and in brief, treatment includes:

1. Conservative treatment with back strapping, sedatives, salicylates, etc.
2. Correction of faulty posture.
3. Bed rest, with traction in severe cases.
4. Eliminate foci of infection.
5. Occasionally, peri-neural injection with Novocaine at the great sciatic foramen may be necessary.
6. Proper back support, such as plaster jacket, back braces, etc.

Rupture of an Intervertebral Disc

Because of its present-day popularity I have reserved a special spot for this condition as a cause of low-back pain with sciatica. Unfortunately this diagnosis is now bandied about as though the diagnosis could readily be made and the condition easily remedied. Such erroneous notions have been fostered by over-enthusiastic articles in popular medical journals and especially in the "throw-away" magazines. In the majority of these articles the diagnosis and operation are made to appear far too simple. Most of the criticism against this oversimplification comes from orthopedic surgeons who appreciate the complexity of the mechanism of the lower back and the variety of its derangements. Also, they have witnessed the abuse of other good operations, like sacro-iliac fusions, Obers fasciotomy, and a host of others. It must always be remembered that innumerable backaches and cases of sciatica always have, and always will, improve under good conservative treatment. Seldom should operative treatment be considered until all conservative measures have been exhausted.

In order to make a diagnosis of protrusion of a disc, the syndrome MUST have:

1. low mid-line backache, plus
2. pain down the posterior aspect of one or both legs, and
3. this pain *must* be intensified by coughing and sneezing, and
4. this pain *must* be recurrent (not continuous).

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Examination may or may not show:

1. Diminished Achilles reflex,
2. Atrophy of the thigh or calf muscles,
3. Sensory or motor loss along the distribution of the fourth or fifth lumbar or first sacral nerve roots.
4. X-Ray—evidence of (a) a filling defect by myelography (with air, Lipiodol, or Pantopaque as contrast media), (b) narrowing of the intervertebral space involved.

The diagnosis and removal of an offending disc is exciting and the results spectacular but—extreme caution is necessary lest you get into unnecessary difficulties. When you realize the awe with which the average laborer considers a lumbar puncture (to him a major operation on his spine) it is far better not to operate upon a doubtful case of herniated disc than it is to do an exploratory operation which is fruitless. The following rules maintain at the Rhode Island Hospital in the handling of these cases.

1. The mental attitude and compensation status of the patient must be correctly evaluated.
2. Other possible condition (like cord tumors, etc.) must be ruled out. Therefore comprehensive hospital study in a properly equipped hospital is vital.
3. The diagnosis and localization should be agreed upon by the "Disc Team" (roentgenologist, neurologist, neuro-surgeon and orthopedist).
4. The exposure and removal of the pathological disc is performed by the neuro-surgeon, while the orthopedic surgeon stands ready to do an immediate spine fusion if he deems it advisable. Dandy's advice that "spinal fusion is entirely unnecessary" is unreasonable and may prove disastrous in some cases.

Much of the literature on this subject stresses the good results obtained by surgery of the offending disc but few workers report what bad end-results may eventuate. Some of these misfortunes include:

1. Recurrences at the same location.
2. Recurrences at a new level.
3. No protrusion of the disc found at operation. (It is to be hoped that with greater care in the selection of cases and greater accuracy in localization of the lesion, fewer "abnormally thickened" Ligamentum Flavum will be recorded.)
4. An unstable back, with increase in the backache, where spinal fusion was disregarded, or if done, was inadequate.

Summary

The vast majority of patients with low-back pains with or without sciatica can be relieved by proper conservative treatment. A small minority of patients with low backache plus recurrent leg

pains (formerly known as "Chronic Recurring Sciatica") should be considered as ruptured disc 'suspects' until adequate investigation establishes the diagnosis. Operative treatment for removal of the displaced nucleus pulposus in a man doing heavy labor should be done only on selected cases where the neurologic symptoms and signs are very definite and where the lesion can be positively depicted by myelograms. If it is necessary to remove laminae, spinal fusion should be done immediately.

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THE TECHNICAL COMMITTEE REPORT

In accepting the report of the Technical Committee of the State Advisory Council on Health on the question of hospitalization and medical and surgical benefits (see page 191), Governor McGrath voiced the opinion that private insurance apparently does not realize fully its opportunities in these fields, and its neglect to contribute more substantially in the provision of such coverage will be a cause for regret later.

This conclusion is certainly borne out in some measure by the report. The sub-committee on medical and surgical insurance submitted proposals on five plans to seven of the largest group insurance companies for quotations on either or all of the plans. No rate quotations were received nor were there any requests for additional information on the subject from the insurance companies. A similar approach in the matter of hospitalization insurance netted four returns from seven outstanding companies, and then on a plan which modified the Committee's proposal and which, in the opinion of the Committee, "impair the value of the coverage and greatly limit the number who would be protected."

Thus the situation devolves itself into the necessity for the medical profession to enter the field of insurance, if possible to do so, to provide, or at least offer, a program of prepayment for part or all of the costs of surgical care, and possibly medical care ultimately. Likewise, the voluntary non-profit

Blue Cross is left with the task to continue to assume the burden of meeting the demand for hospital insurance. The alternative to both projects, unless private insurance assumes its rightful leadership, would appear to point towards compulsory programs under state or federal auspices.

Wisely the State Council on Health has not seen fit to rest on its present achievements. It has delegated its Technical Committee to appoint a sub-committee to study ways and means to stimulate further public interest in the voluntary programs, and it has encouraged the State Medical Society to go forward with its study of prepayment surgical insurance. The big question now is—what attitude does private insurance contemplate? Will it sit back and smugly watch the voluntary non-profit groups struggle with a tremendous program of social insurance which, once started and faced with difficulties, might be usurped by government control? Or will it turn its tremendous organizational and promotional forces into the solution of the social insurance problem to keep it on a non-compulsory basis?

We are fully conscious of the wide variance, both in administration and cost, between voluntary private insurance activated by the profit motive, and the non-profit voluntary corporation in their efforts to augment the social security structure of the individual. We are sympathetic with the position of

continued on next page

the former in hesitating to project its past experience to quote on a broad base such as proposed by the Technical Committee. But we are pledged wholeheartedly to the voluntary method and we are determined to meet the challenge of the present, by bold experiment if necessary.

We can only hope that private insurance, encouraged by the desires of the public, will pioneer with us both for the general good as well as its own protection.

AIR CONDITIONING

Why is the air in the Harz Mountains so fresh and pure? Answer. Because the inhabitants keep their windows closed.

We don't know whether Dr. Alvin L. Barach of the Columbia Presbyterian Medical Center traces his ancestry back to this locality but he has a sympathetic view point. He is quoted as saying that the habit of sleeping with the windows open wastes fuel and is "an important cause of grippe and respiratory infections". His advice is, "Save coal and prevent pneumonia by not opening your bedroom window at night".

Which reminds us of the homeopathic treatment we got at the Boston City Hospital, thirty-five years ago this month. We had a lobar pneumonia and we were treated by being bundled in eighteen blankets with many hot water bottles and put on a bridge two stories up. *Similia similibus curentur*. We don't remember but we probably did get the pneumonia by sleeping with our windows open for we were fiendish and we enjoyed the treatment much more than did the friends who came and tried to prolong their visit a few moments as they clung to their derby hats with numb fingers.

In our ignorance we blamed our trouble on the fact that we had just put on over-shoes for the first time in twenty years. We haven't dared to wear any since and we haven't had pneumonia again. But we have not worked up a good control series. We wonder if Dr. Barach has for his cases.

And after all our slow memory now brings up a point against the New York solon. We were sleeping at the time (when, as and if) at the South End Branch of the Boston Lying-In Hospital, and the air in our bed room had been installed when the house was built a half century before and kept carefully intact by Maggie (the air, not the house).

We know of one case that supports Dr. B's thesis. We were in college with a fellow who slept with his windows closed and we inadvertently went into his room one morning. The atmosphere seemed to be redolent of mercaptan, an inorganic compound synthesized and used as a spray by mephitis mephitis, a black and white striped mammal found north of Central Park, and whose life after the New York manner really starts after sunset. This man

lived to be a grandfather, aged nearly sixty when he got a coronary.

But we are afraid we will never see eye to eye with Dr. Barach on this. His way may be hygienic but it isn't aesthetic.

We are hoping for an authoritative paper on this matter. Perhaps Dr. Utter, recently President of the Providence Medical Association, will contribute one. He used to be an advocate of closed windows and we want the local view-point rather than that of New York.

MORE AND POORER MATERIALS

It is a moot question how far criticism should go in time of war. We must have esprit de corps and we must back up our fighting forces or we will not get far. But on the other hand war being the most fool thing, possibly, that even the human race indulges in, there are bound to be innumerable mistakes. Undoubtedly we must ignore the most of them—*c'est la guerre*. The larger part of our "beefing" is harmless but puerile. However, when vital mistakes are made, authoritative persons, it would seem, are justified and even morally bound to throw light on them.

All this is apropos of an article in a recent Saturday Evening Post by Dr. Evarts A. Graham, one of the most thoughtful of our great surgeons. He points out that pre-war medical education in America and the qualifying of specialists resulted in our doctors being ready to "spring to arms before sunset" when war broke out. And the testimony is practically unanimous that they have done unbelievably efficient work.

But now the armed forces are taking effective measures to assure that such highly-trained men will no longer be forthcoming. Curtailment of pre-medical courses, shortening and telescoping of the medical school work despite a greatly lessened teaching personnel, and the cutting to nine months of the internships are bound to result in providing the armed forces with poorly-trained men and of course in the future the civilian population will inherit the same.

The plea is that the immediate need is dire. But Dr. Graham points out that British, Canadian and Australian forces have about one half the same proportion of medical men to enlistment and they are doing excellent work. War consists of short moments of intense activity and long periods of wasted time. But it is doubtful whether as many good doctors should be twiddling their fingers as has resulted when the civilian population has lost over 40% of their physicians.

One thing that Dr. Graham did not mention is that there is no "staggering" of internes. On September 30, we will say, the hospital has two dozen internes who are really developing some efficiency

(and it is both cheering and pathetic to see how hard some of these young men try to accumulate in nine months what their fathers got in twenty-four). On October first their places are filled by the same number fresh from medical school. And one of them will be "scut" on surgical service and another with no more training will be in full charge of the service. The busy surgeon at 2:00 A. M. will have to rely on this man's report as to whether he needs to come over and operate on an acute case and if he comes he has for an assistant this same potentially good but untrained student.

Readers of Hans Zinsser's *Rat's Lice and History* knows that "epidemics . . . have decided more campaigns than Caesar, Hannibal, Napoleon and all the inspector generals of history. The epidemics get the blame for defeat, the generals the credit for victory". But today the medical service can fight more efficiently than before against the greatest enemy . . . always provided its efficiency is kept at a high level.

DENTAL RESEARCH

Annually there are appeals throughout the country for funds to advance scientific research in the various fields of public health. That there is a lack of funds for dental research is only too well-known, but whether this situation arises from public apathy or the fact that dental defects lack the dramatic appeal of other physical disorders that cripple and shorten life has never been clearly determined.

Undoubtedly dental research in the future will have to turn to state and federal government for financing. Therefore, the proposal of Congressman James E. Murray, of Montana, is certain to create considerable interest throughout the dental profession of the country. In a bill placed before Congress in January, Representative Murray proposes that there should be established a national Institute of Dental Research, as a division of the National Institute of Health in the United States Public Health Service. The Surgeon General of the USPHS would direct the new institute and its work with the assistance of a national Advisory Dental Research Council which would include six appointed members four of whom would be dentists.

Purpose of this Institute would be to conduct and aid research on the cause, prevention and methods of diagnosis and treatment of dental diseases and conditions, to promote coordination of dental research, to provide fellowships and make grants-in-aid to universities and other institutions, to secure the consultation services of other experts, and to cooperate with other State health agencies. A building appropriation of a million dollars, and a sustaining appropriation of \$730,000 annually would finance the plan.

This proposal will undoubtedly have very strong backing from health authorities throughout the nation, and certainly will gain the active support of the dental profession. All are agreed that there is an imperative need for continuous research in the problems of dentistry. It is to be regretted, however, that this initial major financial contribution for dental research must come from tax money, rather than from an awakened public consciousness of the paramount need for good dental care for better all-round health. It is to be hoped that should the Murray measure prevail it will stimulate private philanthropy in the same field, rather than leave the future of dentistry increasingly dependent on government support.

PRIORITY ON SYMBOLS

Recently we received the following letter from the General Secretary of the National Board of the Y. W. C. A.

"The editorial entitled "Now It's the Blue Triangle", appearing in the November 1944 number of the RHODE ISLAND MEDICAL JOURNAL, has been called to my attention by members of our Association.

"As perhaps you already know, the Young Women's Christian Association all over the world has for more than thirty years used the symbol of the blue triangle to represent its work. We do not have a copyright on this symbol but we have used it widely in this country as has the Young Women's Christian Association in Canada as well as the Associations in other parts of the world. I am enclosing two pieces of material which show you the kind of use we make of it and, as you notice, it appears on this stationery.

"It seems to us that any use of this symbol by another group could only lead to confusion. I shall be glad to know whether consideration was given to this matter before decision to use the symbol of the blue triangle for a particular plan of medical financing was made."

We sent the General Secretary the following reply,—

"Dear Madam:

"We are in receipt of your letter regarding our editorial "Now It's the Blue Triangle", in which you point out that the Young Women's Christian Association has used this symbol all over the world for more than thirty years. In your final sentence you decidedly call us to account for the use of the Blue Triangle symbol in a plan of medical financing.

"Now if you will reread our editorial you will see that we make it plain that this plan has originated with the Bankers Association of Massachusetts, and it is they and not we who have adopted the symbol. As to the plan itself—we have discussed its merits in our editorial

and have certainly not shown enthusiasm over an idea which is far from new.

"As to the use of the symbol, we sympathize with you thoroughly. Yours is a great institution. Most of us know the fine work which you have done. If not legally, you have morally made this Blue Triangle very peculiarly your own property. We feel that the Bankers Association of Massachusetts were decidedly wrong in using it and we endorse your protest whole-heartedly.

"And now do give us a little sympathy. Many of us in our profession think that our standards and the things that we have done for the peoples of the world are among the highest of human achievements. But from Senator Wagner down, apparently the public has decided that we are on the other end of the docket. The Readers Digest teaches us our medicine and every publication coaches us as to our relations with our patients. And when things are done the ultimate criticism falls on us, even for the use of Blue Triangles.

"Please accept our sympathy and send your protests to the Bankers Association of Massachusetts."

RHODE ISLAND MEDICAL JOURNAL



Journal Photo

REGINALD FITZ, M.D. (Right) of Boston, receiving the Charles V. Chapin Memorial Award of the City of Providence from Fredrick S. Barnes, Chairman of Providence City Council Award Committee.

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PRINCIPLES UNDERLYING THE TREATMENT OF PERIODONTOCLASIA*

IRVING GLICKMAN, B.S., D.M.D.

The Author, *Irving Glickman, B.S., D.M.D., of Boston, Massachusetts. Assistant Professor of Oral Pathology, Tufts College Dental School; Lecturer, Forsyth School for Dental Hygienists, Boston.*

THERE is a difference of opinion in the literature regarding the basic nature of the changes responsible for the tissue destruction in periodontoclasia. A major aspect of the problem deals with the relation between gingival inflammation and the destruction of alveolar bone. Investigators are divided into two schools on this issue, those who feel that gingival inflammation is the initial mechanism which is responsible for the bone destruction¹ and those who maintain that the primary destructive change in periodontoclasia occurs in the alveolar bone and that the effect of gingival inflammation is a secondary one.²

It is erroneous to consider this problem of bone destruction as being of only academic concern in the field of clinical periodontology. The term periodontoclasia³ means destruction of the tissues which surround and support the teeth. These structures are the gingiva, periodontal membrane, cementum and alveolar bone. In the final analysis, however, it is the destruction of the alveolar bone which is responsible for the mobility and migration of the teeth and their ultimate loss in this condition. Periodontoclasia⁴ has been reported as the cause of the loss of more teeth than is dental caries beyond the third decade of life. Although considerable progress has been made in the treatment of periodontoclasia the need for further advances is obvious.

Because of the significance of bone destruction in periodontoclasia an understanding of the fundamental nature of the bone changes in this condition is a primary requisite for its proper diagnosis and successful treatment. It is the purpose of this paper to evaluate the findings in recent studies devoted to bone changes in periodontoclasia in terms of their application to the clinical aspects of this condition.

In examining alveolar bone, it is necessary to divorce it from a purely dental consideration and evaluate it in relation to the remainder of the body as a unit of the skeletal system. Bickering over the

dental relationships of alveolar bone has served only to emphasize the details and obscure the general principles which govern the initiation and progress of periodontoclasia. Under normal conditions, the internal architecture of alveolar bone and the height of the bony structure in relation to the roots of the teeth are the resultants of an equilibrium between bone formation and bone resorption. Human autopsy study⁵ and animal experiments⁶ have shown that the status of this equilibrium, or the comparative relationship between bone formation and bone resorption is the same in the jaws as it is throughout the remainder of the skeletal system at any one time. This status of the bone equilibrium is not fixed. It is a variable, dependent upon the composite physiological or pathological processes of the entire body for its regulation. When as the result of a systemic disturbance, the microscopic bone equilibrium is shifted in the favor of resorption throughout the remainder of the skeletal system, bone resorption predominates in the jaws, too, and loss of alveolar bone occurs, regardless of the condition of the gingival tissues. Loss of alveolar bone, when it occurs under such circumstances, is essentially a local manifestation of a generalized skeletal disturbance. It is denoted clinically as periodontoclasia. The many patients who present marked alveolar bone loss radiographically without a perceptible change in the gingivae corroborate the above analysis.

The fact that alveolar bone is constantly subject to systemic regulation constitutes a "bone factor" which is fundamental in all cases of periodontoclasia.⁷ It cannot be too strongly emphasized that the demonstration of systemic regulation of alveolar bone under altered systemic conditions does not preclude systemic regulation under normal systemic conditions. Systemic regulation of alveolar bone exists at all times in periodontoclasia. Its effect is progressively more apparent with the increasing severity of systemic disturbances.

It is apparent that the rôle of gingival inflammation in periodontoclasia must be evaluated on the basis of its effect upon the constantly present bone equilibrium in the jaws. When chronic inflammation is artificially induced in the gingival crevice of experimental animals which are normal in all other

continued on next page

*Presented before the Rhode Island State Dental Society at its 67th Annual Meeting, at Providence, R. I., January 23, 1945.

respects, loss of supporting bone occurs. The reason bone loss occurs under such circumstances is that the inflammation has altered the local bone equilibrium in the gingival area by adding a bone resorptive influence. Periodontal destruction in such cases is limited to the bone margin adjacent to the gingival inflammation. The underlying alveolar bone remains unaltered. It is important to remember that adding the resorptive influence of inflammation in normal animals does not eliminate the normal formative component of the bone equilibrium. The normal bone formation retards the amount of alveolar bone destruction resulting from the presence of gingival inflammation. The microscopic detection of bone formation immediately adjacent to zones of chronic gingival inflammation and osteoclastic activity in human autopsy material corroborates the observations in animals.

Gingival inflammation when present is therefore not the sole determinant of the severity of bone destruction in periodontoclasia. The destructive influence of gingival inflammation is regulated by the individual "bone factor". In normal individuals the systemic regulation of the response of alveolar bone to gingival inflammation assumes the form of microscopically detectable bone formation. As the normal formative tendency of the bone equilibrium is reduced in alveolar bone, the resorptive influence of gingival inflammation becomes more effective and the resultant bone destruction more severe.

Because of variation in the individual "bone factor" inflammation of equal severity and duration produces different degrees of bone loss in different individuals. The destructive effect of gingival inflammation upon the alveolar bone in which a systemically motivated tendency toward bone loss exists exceeds the destruction resulting from gingival inflammation in normal individuals by the degree to which the bone equilibrium has been altered in the direction of resorption. This alteration in the bone equilibrium is dependent upon the severity of the systemic disturbance. The marked difference in the response of alveolar bone to gingival inflammation under altered systemic conditions has been demonstrated microscopically. Normally, as pointed out above, the effect of inflammation is limited to the margin of the tooth supporting bone and produces a diminution in the height of the interdental septum which can be detected radiographically. The remainder of the alveolar bone is not changed in such cases. When the systemic background is altered the bone picture throughout the jaws is changed. The formation necessary to maintain the alveolar bone is absent from those areas where it normally exists. Bone resorption is increased on both a comparative and actual basis. The effect of gingival inflammation is

no longer limited to the gingival margin of the supporting bone. Large segments of bone deep in the interdental septa are destroyed en mass. Reduction in the height of the interdental septum proceeds at a rate far in excess of that which occurs in normal animals. In addition generalized destruction of the supporting bone independent of, and unrelated to the inflammation occurs in the remainder of the jaws because of the predominance of microscopic bone resorption produced by the altered bone factor.

The implications of the concept of the "bone factor" in the clinical diagnosis and treatment of periodontoclasia are many. Since gingival inflammation is not the sole determinant of bone destruction, the severity of gingival inflammation observed clinically is not a reliable index of the severity of the individual case of periodontoclasia. In fact, it has been demonstrated above that severe periodontoclasia may occur in the absence of marked inflammatory involvement of the gingivae. In addition, gingival inflammation of equal severity and duration may be associated with markedly different degrees of bone loss in different patients. Similarly, pronounced gingival suppuration may occur in many cases in which there is only a slight degree of bone loss, in contrast with the presence of an extremely moderate or imperceptible amount of pus formation associated with marked bone destruction.

It is apparent too, why the depth of individual periodontal pockets neither regulates nor indicates the severity of underlying bone loss in all instances. One of the effects of chronic inflammation is to produce an increase in the bulk of the gingivae because of the fluid and cellular exudate and proliferation of connective tissue and epithelial cells associated with it. Increase in gingival bulk fosters an increase in the depth of the gingival crevice and resultant pocket formation. The destructive tendencies in the bone stimulated by inflammation may be retarded by systemic influences in the bone in many cases in which proliferative gingival changes and progressive pocket depth proceed unhampered. These facts explain the radiographic finding of only a moderate degree of bone loss in many cases in which pocket depth is severe.

The X-Ray properly utilized is the most reliable available clinical index of bone loss in periodontoclasia. It indicates the height of tooth supporting bone at the time of examination. However, because it does not portray the prevalent status of the microscopic equilibrium between bone formation and bone resorption, it does not afford a dependable basis for prognosis as to future bone destruction and resultant tooth loss. Two cases with apparently similar degrees of bone loss may follow entirely different courses in so far as further bone

destruction is concerned. With the exception of severe instances, sole reliance upon arbitrary X-Ray standards based upon the proportion of bone remaining in relation to the length of the root in order to govern decisions regarding the extraction or retention of teeth in individual cases of periodontoclasia is a procedure of questionable value. The limitation of the X-Ray in the diagnosis of periodontoclasia may be overcome to some degree by the utilization of a series of X-Ray studies for the analysis of bone changes in individual cases.

Basically, the treatment of periodontoclasia must be directed toward the regulation of the individual "bone factor" in order to arrest the destruction of alveolar bone. The systemic modification of bone changes in the jaws on a hormonal and nutritional basis is a reality today. The future will reveal information of further value in the systemic therapy of alveolar bone changes.

In addition to a systemically controlled bone balance in the jaws the added resorptive tendencies induced by gingival inflammation may alter the bone equilibrium in the direction of destruction. Any local environmental factors which contribute to gingival inflammation should therefore be alleviated. There is no substitute for the most careful local therapy, whether it be "conservative" or "radical" for the attainment of this end. The effect of the elimination of gingival inflammation is the removal of a resorptive tendency which is contributing to the imbalance of the local bone equilibrium. In those patients in whom the systemic influence is such that the altered bone factor is capable, of itself, of producing alveolar bone destruction, the removal of gingival inflammation will serve to retard the bone loss in only slight degree. In such individuals progressive periodontoclasia occurs even when the gingivae are normal. When the bone factor is only moderately altered, so that it will not result in bone loss without the added resorptive tendency created by gingival inflammation, the removal of gingival inflammation may arrest the progress of periodontal bone loss. Such individuals must be controlled locally on a most diligent basis because bone loss will proceed again associated with the recurrence of a gingival inflammatory change. In patients with a normal bone factor the alleviation of gingival inflammation will result in a cessation of periodontoclasia. Such individuals offer a wide "margin of safety" in so far as gingival inflammation is concerned. Briefly stated, the effectiveness of local treatment in the control of periodontoclasia is inversely proportional to the degree to which the periodontal bone loss is the result of systemic motivation.

The individual response to periodontal treatment may be evaluated by careful study of qualitative changes in the trabecular pattern at the gin-

gival margin of the interdental bony septa revealed by a series of X-ray examinations. When bone destruction is in progress, the interdental bony margin presents the radiographic appearance of an irregularly roughened surface from which filamentous spicule-like gray projections extend for a varying height. Successful treatment alters the bone equilibrium in this area so that bone formation is no longer overbalanced by resorption. Bone deposition then may proceed in three regions, along the periodontal membrane, in relation to periosteum of the alveolar bone and along the endosteal margins of the marrow spaces. The filamentous bone spiculae described above afford a scaffolding around which the new bone is deposited. The jagged irregularly radioluscent margin of the interdental septa is replaced by a smooth continuous relatively radiopaque minutely trabeculated border. These changes in the radiographic appearance of the interdental bony septa may be interpreted as evidence of the cessation of alveolar bone destruction.

In conclusion, exposition of the importance of the "bone factor" in periodontoclasia introduces a significant concept into the field of periodontology. It reduces the many complexing clinical aspects of periodontoclasia to a common denominator of microscopic bone changes and thereby affords a fundamental direction for the diagnosis and treatment of this condition. Although it does not minimize the significance of local inflammation, it emphasizes the important role of the systemic background in the regulation of periodontal bone loss. It demonstrates that the severity and duration of gingival inflammation are not the sole determinants of periodontal bone destruction because the response of bone to external stimuli is at all times governed by systemic regulation. It describes how periodontoclasia may occur in the absence of gingival inflammation. It points to the reason for the thorough elimination of gingival inflammation by careful local therapy when such inflammation exists in periodontoclasia. It explains why the ultimate control of periodontoclasia is dependent upon the clarification of physiological mechanisms which favor bone deposition in addition to the detection of systemic disturbances which stimulate bone resorption and the application of such tangible information to clinical practice.

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- ⁴Brekhus, Peter J., *J.A.D.A.*; 15-679-1928
- ⁵Glickman, I. and Wood, H., *J.D.R.*; 21-35-1942
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- ⁷Glickman, Irving, *Bulletin Mass. Dent. Soc.*; 20-14-1944



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FROM THE SECRETARY'S DESK

The Board of Trustees meets at the Providence Biltmore Hotel the second Tuesday of each month at 8 P. M. for the transaction of the business of the Society. Any member of the Society wishing to speak in behalf of, or against, any action taken, or expected to be taken by the Board for the Society, is invited to be present at any meeting. It is YOUR Society, and the Board of Trustees wants YOUR opinion and advice regarding any and all Society matters.

* * *

As no ADA Journal will be mailed out to members in arrears on annual dues after April 1 everyone is urgently reminded to be sure to send his annual dues to the Secretary. Each year some members fail in this respect and thereby lose out on some issues of the Journal before the oversight is corrected. Don't make this mistake this year!

* * *

The Society notes with regret the death on February 5, 1945 of Dr. Rocco DeFeo, of Providence.

RESOLUTION ON THE HORNER REPORT

The Board of Trustees of the Society have viewed with much concern the widespread publicity given the article attributed to Dr. Harlan H. Horner, Secretary of the Council on Dental Education of the American Dental Association. Dr. Horner's alleged statements, particularly those referring to the adoption of racial quotas for the entrance of students into dental schools, are considered most un-American and unworthy of the dental profession of America.

Therefore the Board of Trustees unanimously adopted the following resolution regarding this report:

Whereas: the recommendations pertaining to admission to dental schools contained in the Horner report place emphasis on racial and geographic origin as entrance qualifications, and

Whereas: such attempts at arbitrary division of citizenship is completely contrary to the principles promulgated by the Constitution of the United States, and

Whereas: the enunciation of such ideologies based on racial discrimination has no place in American educational institutions, and

Whereas: we, the members of the State Dental Society of Rhode Island, where religious liberty had its birth, do not subscribe to the above quoted tenets and are unequivocally opposed to being represented by such un-American statements, therefore be it

Resolved: that we advise the Committee on Education of the House of Representatives of our desire to be recorded in opposition to this principle of racial discrimination, and therefore be it further

Resolved: that we believe the statements above referred to emanating from the Council on Dental Education to be unworthy of our profession and do not express the thoughts of the American Dental Association, and be it further

Resolved: that we petition the American Dental Association to repudiate the statement of the council on Dental Education and to replace its membership with men sufficiently familiar and in agreement with the principles of the Constitution of the United States to insure against a repetition of this disgraceful incident, and be it further

Resolved: that a copy of this resolution be transmitted to the House of Delegates of the American Dental Association and that this resolution be published in the RHODE ISLAND MEDICAL JOURNAL.

The following doctors have been recently accepted into active membership in the Rhode Island State Dental Society:

Dr. John Cicerchia, 77 Maple Ave., Barrington, R. I. (U.S. Army)

Dr. Raymond DePetrillo, 120 Laurel Hill Ave., Providence, R. I.

Dr. Nathan A. Estes, Jr., 130 Touro St., Newport, R. I. (U.S.N.R.)

Dr. Robert E. Lindemann, 52 Zone Street, Providence, R. I. (U.S.N.R.)

Dr. William A. Pennine, 118 Empire Street, Providence, R. I.

Dr. John J. Rouslin, 7 High Street, Pawtucket, R. I.

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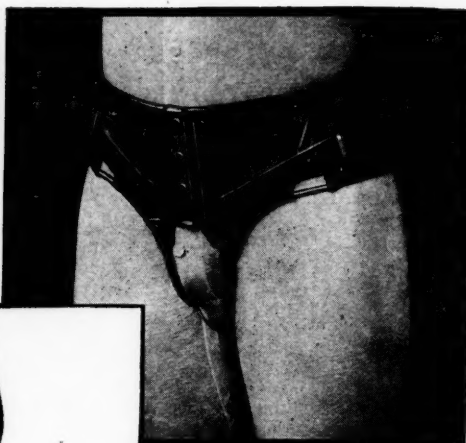
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INDUSTRIAL HEALTH

COMMITTEE ON INDUSTRIAL HEALTH

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FATIGUE IN INDUSTRY

There are many factors affecting the productivity and impairing the efficiency of those who labor. Fatigue is one of the least understood and most far reaching in its consequences. Under present conditions, therefore, the problem of fatigue takes on added importance and this is especially so in view of the increasing demands upon our workers. There is no good means of measuring fatigue. Again, there are many types of fatigue which offer different manifestations and different etiologic factors. Some of the more common causes of fatigue are first, the intense concentration required to "follow the machine" in certain mechanical procedures. This will produce a sense of fatigue even though the employee has no physical work to do. Secondly, repeated operations become monotonous and monotony is known to be a definite cause of fatigue. Certain joints and muscles may go into spasm and even produce arthritis because of repetitious procedures. Speed, unnatural postures, etc., may produce a form of fatigue. The worker who is finicky in his food habits may develop an Avitaminosis and thus produce a nerve fatigue from dietary causes. In other cases where air hammers are used, paving brakes, and pneumatic drills, we may find fatigue resulting from physical shock; or noise—Loud clatter of unsynchronized noises produce chronic tinnitus which may shatter the nerves of the ears. We are all familiar with the deafness that follows long years of work in the weave shed.

Fatigue may result from temperature changes—excessive heat or excessive cold or sudden change of temperature causing loss of body water; loss of salt in the body producing heat cramps so familiar in humid weather.

The glare of too bright illumination resulting in eye strain or conversely poor light resulting in eye strain, will also produce fatigue. A poor lighting system may produce nervousness, gas, indigestion and physical discomfort which may be factors in the production of fatigue.

Abnormally long hours of work, excessive overtime, produce chronic fatigue. It has been shown to result in lost time during work, increase in accidents, absenteeism and sickness. These in turn produce a decrease in the output of any industrial establishment.

In England after Dunkirk the industrial establishments abolished holidays and went on a seven

day working week with an average hours of work of seventy to eighty hours. Within a period of two months production had fallen off to such a degree that today England has a working week for women of forty-eight hours and for most men fifty-four hours with a maximum of sixty hours a week.

The value of holidays and periods of recuperation have been definitely recognized and now are planned for.

In addition to being a cause of decreased production itself, fatigue lowers body resistance to a point where acute respiratory diseases or some chronic latent infection flares up and thus causes further disorder and disability.

Actuary statistics have proven that persons working in a plant with a twelve hour day had three times as many accidents as those employed with a ten hour schedule.

Industrial physicians will do well to ponder on the subject of fatigue and to check wherein the forces of fatigue are at work in their plants and offer suitable remedies.

The course in Industrial Health and Hygiene at Brown University continues every Tuesday evening at 8:30. It is open to the general public, all those interested in industrial health and hygiene, and doctors, nurses, management and labor. Obtain registration blanks at Brown University. Application accepted at any time.

DR. KENNEY HEADS

N. E. INDUSTRIAL PHYSICIANS

Dr. John F. Kenney, of Pawtucket, president-elect of the Rhode Island Medical Society, was recently honored with the Presidency of the New England Conference of the American Association of Industrial Physicians, succeeding Dr. Daniel Lynch, medical director of the New England Telephone and Telegraph Company. Named to the office of president-elect was Dr. Thomas Kenrick, medical director of the Boston Elevated Company.

The first Spring meeting of the Conference, according to the new President, will be held on Wednesday, May 2, at 1 p. m., at the J. & P. Coats, Inc. building in Pawtucket. Speakers will be well-known experts in their various specialties who will deal principally with rehabilitation programs of interest to every practitioner of medicine. Announcement of the complete program for this important meeting will be sent to every physician later in the Spring.

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HOSPITAL ASSOCIATION OF RHODE ISLAND

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THE Rhode Island Voluntary Advisory Council on Health, appointed by Governor J. Howard McGrath a year ago, on Monday, February 19th, received and approved the report of their Technical Committee, which is printed in this number of the RHODE ISLAND MEDICAL JOURNAL. (See page 191)

The Technical Committee after long and careful investigation has recommended, and the Voluntary Advisory Council on Health has accepted, the principle of voluntary hospitalization insurance for another year. I think it is safe to say that most physicians—in fact, most human beings—would prefer to operate under a voluntary system regarding anything that has to do with their health and welfare. Physicians perhaps more than any other group in the community recognize, however, that too large a percentage of our population make no provision for sickness; and, therefore, what has often been referred to as one-third of our population, when illness comes to them are financially entirely unprepared for the cost of hospitalization, the care of the doctor, or the purchasing of medicine, and that this group becomes the charitable obligation of the hospital, the medical profession or the tax payer, who is called upon to meet in part the cost of care of the indigent. This should, of course, be corrected as far as it is possible to do so.

The growth of protection in sickness which has developed during the past few years through the efforts of the private insurance companies, and from the Blue Cross, has been most gratifying and has proved of tremendous financial help to all of our hospitals.

If the voluntary plan for hospitalization insurance is to be thoroughly successful it can only become so if the medical profession, hospital personnel, all employers of labor, and the labor organizations themselves at once get behind this plan energetically. If during the next year the voluntary system proves unsuccessful we feel sure that a compulsory plan will be adopted.

At the present time a larger percentage of the citizens of this State have hospitalization insurance than in any other state in the Union. This is a fine record but it is still not good enough. The medical profession and hospitals have a great stake

in this whole matter, so let us give of our very best efforts to seeing to it that just as nearly 100% of all our citizens provide themselves with hospital insurance as is possible.

• ARTHUR H. RUGGLES, M.D.

HOMEOPATHIC HOSPITAL TO EXPAND

Post-war hospital planning for Rhode Island received further impetus within the past month with the announcement at the annual meeting of the Homeopathic Hospital of plans to construct a new maternity and children's wing. Blueprints for the expansion were prepared after an architectural study was authorized by the Trustees a year ago and preliminary details of the proposed expansion are expected to be revealed in the near future.

HOSPITAL BED ACCOMMODATIONS

A recent tabulation released by the Hospital Service Plan Commission for the Blue Cross plans approved by the American Hospital Association shows that members hospitals of the Blue Cross plans numbered 3,215 as of last October first. The ratio of Blue Cross enrollment to member hospital bed capacity is also cited as a rough index of the influence exerted by Blue Cross upon hospital care and finances. Using only entire states as the basis for comparison, the ratio of enrollment to Blue Cross hospital capacity is highest in the following states: Delaware, 152; Rhode Island, 120; Ohio, 108; Colorado, 80; District of Columbia, 78; Minnesota, 77; Missouri, 66; Connecticut, 62; New York, 61; Massachusetts, 57.

POSTWAR HOSPITAL CONSTRUCTION

A recent survey conducted by the American Hospital Association, made by John N. Hatfield, administrator of Philadelphia's Pennsylvania Hospital, shows that proposed non-federal hospital building is anticipated that will require \$1,193,133,985 and will provide 180,826 new hospital beds. The report is based on an inquiry directed to 1,683 hospitals throughout the country. Seventy-four of the hospitals reported having the cash on hand to finance their postwar plans, three hundred and thirty expressed a need for government funds, and the others will plan to raise money from private financing, public campaigns or subscriptions.

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- Mutual Benefit is licensed in every state in the U. S. A. and Canada.
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HOSPITAL INSURANCE AND RELATED PROBLEMS

Report of the Technical Committee to the Rhode Island Voluntary Advisory Council on Health

THE Rhode Island Voluntary Advisory Council on Health at its first meeting on February 5, 1944, authorized the appointment of a Committee for the study of hospital insurance and related problems. This committee was designated the Technical Committee. The membership of the Committee was later appointed by the Chairman of the Council, and the Council was informed of its personnel in the Interim Report of the Committee dated March 9, 1944. Copies of this report with attached exhibits were distributed to, and discussed by, the members of the Council at its meeting April 10, 1944.

The work of the Technical Committee divided itself naturally into two phases: one a study of the proposal for medical and surgical benefits, and the other concentrating on the proposal for compulsory hospitalization insurance. Accordingly, and has been reported previously, two sub-committees were formed.

The sub-committee on Medical and Surgical Insurance met on several occasions, and after research and deliberation, was able to compile five proposals covering:

1. Surgical Care While In Hospital.
2. Surgical Care Either In or Out of the Hospital.
3. Surgical Care In and Out of Hospital, Plus Medical Care in Hospital.
4. Surgical Care In and Out of Hospital, Plus Obstetrical Care in Hospital.
5. Surgical Care In and Out of Hospital, Plus Medical and Obstetrical Care In Hospital.

These proposals were submitted to seven of the largest group insurance companies for quotations either on any or all of the five plans.

No rate quotations were received from any of the seven companies, nor were there any requests for additional information on the subject.

The Technical Committee is currently aware that, in addition to its own efforts in the field, the House of Delegates of the Rhode Island Medical Society has appointed a committee to study the possibility of providing surgical care on a prepayment basis. Although the medical profession will be concerned with the development and administration of a surgical care program, the primary beneficiary will be the people of Rhode Island. Accordingly, it is the hope of this Committee that

the medical profession will lose no time in securing the necessary enabling legislation and developing a sound program of surgical care protection.

In view of the fact that the committee has been unable to get information from insurance companies regarding medical and surgical rates, it is the recommendation of the Technical Committee that further study of this matter be referred to the committee appointed by the House of Delegates of the Rhode Island Medical Society, and that this committee be requested to make public its completed report.

The second phase of the problem—the phase relating to compulsory hospital insurance—has been given close study by another sub-committee which has given the matter a great deal of attention. It was the desire of the committee to outline a proposed compulsory plan for hospital care and to ascertain the cost of such a program. The committee wanted a comprehensive plan of benefits which would meet the social objectives implied in a compulsory program and one so extensive that there would not be continued pressure for increased benefits, thereby creating increased costs to employers and employees as time progressed.

As was stated in the Interim Report of April 10, 1944, the sub-committee, after study and deliberation, was able to outline a proposed plan of compulsory hospitalization. A copy of this proposed plan is attached. This plan was submitted to the Blue Cross and to the seven largest insurance companies writing group insurance for rate quotations, in order to ascertain the probable costs involved.

The rates submitted by Blue Cross are as follows:

1. For the employed person (on a compulsory basis)
85c monthly.
2. For the employee's spouse and all unmarried children under age 19 (on a voluntary basis)
\$1.10 monthly.

None of the seven insurance companies submitted rates on the committee's proposed plan of compulsory hospital care. While it was the expressed desire of the committee to receive quotations on a plan with as broad a base as possible in order to anticipate in so far as possible the future demands to be made upon it, the insurance companies were hesitant to project their tables of expe-

continued on page 193

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Vitamin B₂ (Riboflavin), 340 Gamma
Vitamin B₆, 220 Gamma
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Nicotinic Acid, 8 Milligrams
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Dosage: Children, 1 teaspoonful 3 or 4 times a day. Adults, 2 teaspoonfuls 3 or 4 times a day.

Packages: Eight ounce and gallon bottles.

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HOSPITAL INSURANCE AND RELATED PROBLEMS

continued from page 191

rience to such a broad base.

They requested therefore and were accorded the privilege of quoting rates on a plan which deviated from the committee's proposed plan in 5 important features. Their quotations were based on a plan which modified the committee's proposal in the following manner:

1. Limiting the application of the compulsory feature at the outset to groups of 10 or more employees.
2. Permitting the employed person to enroll the spouse and unmarried children between the ages of 3 months and 18 years on a voluntary basis only if 75% of those at each place of employment with eligible dependents agree to do so.
3. Permitting the employer to be a self-insurer.
4. Allowing no continuation of protection on a direct payment basis in the event of termination of employment for any reason; giving instead, extended coverage for a short period of time without payment of premiums.
5. Placing a dollar and cents limitation on those extra services to be provided, including the use of operating room, medicines, etc.

Through the cooperation of Albert Pike, Jr., of the Life Insurance Association of America, rates were received from four representative companies, based on the aforementioned limitations. These rates quoted on 10 or more employees are:

| MONTHLY RATE—EMPLOYEE ONLY | | | | ADDITIONAL MONTHLY RATE For Dependents, Spouse and Children 3 Months—18 Years |
|----------------------------|---|-------------------------|---|---|
| | Rate for Less Than 11% Female Empls. | 50% Female Empls. | Rate for More Than 91% Female Empls. | |
| Firm 1 | \$.76 | \$1.14 | \$1.62 | \$2.52 |
| Firm 2 | .80 | 1.16 | 1.56 | 2.65 |
| | Less Than 25% Female Employees | | More Than 75% Female Employees | |
| Firm 3 | .90 | 1.12 | 1.58 | 2.54 |
| | Less Than 33% Female Employees | | | |
| Firm 4 | | | | |
| 10-50 emp. | 1.00 | 1.20 | 1.50 | |
| Over 50 | .81 | 1.09 | 1.47 | 2.23 (min.) |
| Minimum employee rate | | | Minimum emp. & dep. rate | |
| | \$.76 monthly | | | \$3.04 monthly |
| Maximum employee rate | | | Maximum emp. & dep. rate | |
| | \$1.62 monthly | | | \$4.21 monthly |

Note 1—above rates would be increased from 15% to 40% in industries such as railroads, breweries, furriers, hot metal industries, refineries, and liquor and wine wholesalers and where there is an abnormal proportion of higher-age persons.

Note 2—Group insurance policies contain an experience rating clause under which the rate may be reduced or increased from time to time after the first policy year.

Mutual insurance companies will return a dividend if the experience has been favorable, thereby reducing the cost.

This left the Technical Committee with only one bid on the proposed plan, together with four bids on a modified plan as proposed by the private insurance companies. It is the feeling of this Committee that these latter bids are made on a plan which does not fulfill the social objectives envisioned by Governor McGrath in his 1944 message to the Legislature.

One of the objectives of the committee was to ascertain rates in order that employers and employees might be able to estimate the probable costs of such a program. In view of the fact that the rates quoted by private insurance companies vary so with the percentage of male and female employees, and with the type of business involved, it would be difficult to give both employers and employees a satisfactory approximation of cost. Furthermore, the rates quoted by the insurance companies seem to this committee so high as not to be competitive with the Blue Cross rates on the plan approved by the committee.

The committee is fully mindful of the disadvantages present in the lack of competitive rates and is greatly concerned because only one insurer has quoted a rate on the plan it approved which would provide insurance for the protection of all but a small proportion of all people employed in Rhode Island and their dependents. The committee believes the modifications made in its plan by the insurance companies impair the value of the coverage and greatly limit the number who would be protected.

Since Governor McGrath suggested the need and advantage of hospital insurance, there has been a great increase in the number of people in Rhode Island who have acquired such protection. At the present time it is estimated that between the Blue Cross and the private insurance companies, a total of 52% of all residents of the State are covered.

This increase has been secured on a basis which is not only voluntary, but competitive both as to cost and benefits. While the Blue Cross rates quoted herein apply to compulsory hospitalization insurance, that organization is now offering a new plan on a voluntary basis which is similar in most respects to the proposed compulsory plan. Private insurance companies are offering both hospitalization and surgical insurance so that there is more active competition than ever before.

Many corporations have found that the ill health of employees and their families interferes with

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STARKMAN'S LAB. SERVICE

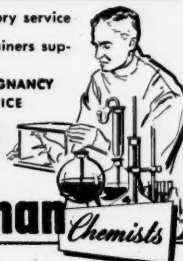
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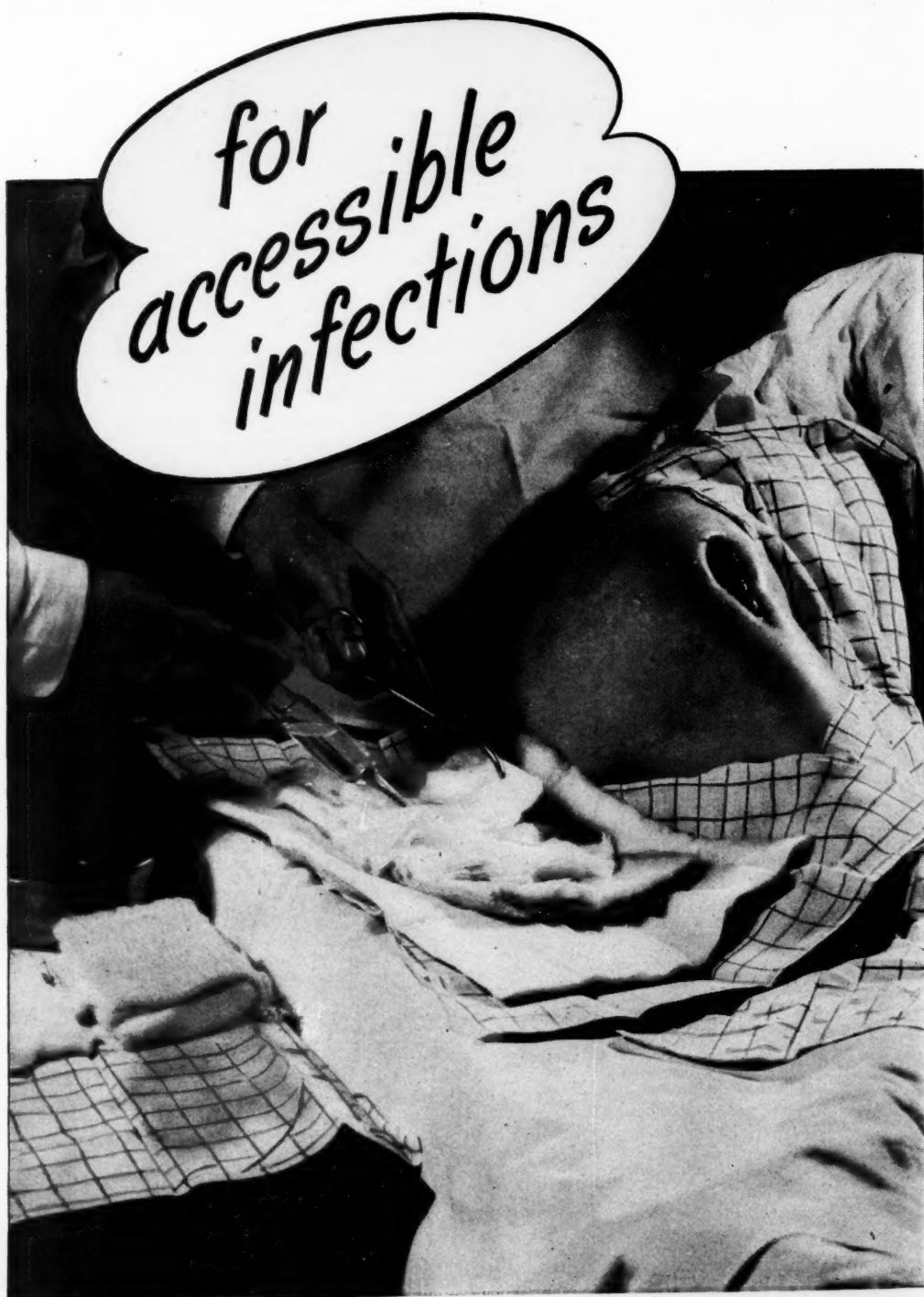
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Supplied in 10 cc. vials, as a 2 per cent solution, to be diluted with sterile distilled water before use.



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HOSPITAL INSURANCE

continued from page 193

successful operation of any business, and they have accepted the responsibility for keeping the community a good place in which to work and to live by providing health protection for employees. In this connection, we believe that the State would do well to encourage employers, employees, and the general public to participate voluntarily in order that there can be as widespread protection as possible.

The Technical Committee, in view of the foregoing, respectfully suggests that the Council at this time might well give consideration to the advantages that would accrue from deferring action on a compulsory plan. In the course of study made of various plans, the sub-committee was struck with the wide variations in benefits which insureds are entitled to and believes that serious thought should be given to standardizing minimum benefits, much as other forms of insurance must guarantee basic protection rights under the State law. It believes that purchasers of hospital insurance are entitled to know that the protection is adequate and has had careful consideration by persons competent to make such a decision.

By deferring action on a plan of compulsory insurance until the next annual session of the General Assembly, a period of time would be available during which employers and employees would become better acquainted with the advantages of hospital insurance and make such arrangements as they might desire to secure such coverage. Inasmuch as hospital facilities are not now available to care for the number of patients that might be expected if compulsory insurance were made effective immediately, and cannot be provided until postwar condi-

RHODE ISLAND MEDICAL JOURNAL

tions make building on a large scale possible, relatively little would be lost and much gained by using the intervening time to enroll as many persons as possible under a voluntary method.

The Technical Committee strongly endorses the principle of prepaid hospital costs through insurance and considers it an important social welfare advancement.

Respectfully submitted,

TECHNICAL COMMITTEE

By:

Arthur H. Ruggles, *Chairman*
(Doctor of Medicine, Superintendent of Butler Hospital)
Frank J. Benti
(President, R. I. State Congress of Industrial Organizations)
Edward L. Coman
(Insurance Executive, Aetna Life & Affiliated Companies)
John E. Farrell
(Executive Secretary, R. I. Medical Society)
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Henry E. Gauthier
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(President, R. I. State Branch, A. F. L.)
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(President & Treasurer, Davol Rubber Co.)
Herman C. Pitts
(Doctor of Medicine — Providence)
Dennett L. Richardson
(Doctor of Medicine, Superintendent of Rhode Island Hospital)
Stanley H. Saunders
(Executive Director, Hospital Service Corporation of R. I.)
Stanley Sprague
(Doctor of Medicine — Pawtucket)
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(Doctor of Medicine, President of R. I. Medical Society)
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★ Constipation, and poor sphincter muscle control resulting from the use of cathartics, often yield to treatment by mechanically stretching the sphincter muscles. Sold on prescription only; not advertised to the laity. Obtainable from your surgical supply house or ethical drug stores. In 4 graduated-size Sets, \$3.75. Write for Brochure.

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OUTLINE OF A COMPULSORY PLAN FOR HOSPITAL CARE

I. PERSONS TO BE COVERED:

1. Every person employed in Rhode Island, who is an employee (as the term is defined in the Rhode Island Unemployment Compensation Act) shall be insured on a compulsory basis with an approved insurer as hereinafter defined, either by his employer and at the expense of the employer, or by his employer at the joint expense of the employer and employee.

2. The employed person may voluntarily enroll the spouse of such employee and unmarried children under 19 years of age at his own expense.

II. HOSPITAL SERVICE TO BE PROVIDED BY AN APPROVED INSURER:

1. Bed, board and general nursing care at hospital's rate up to a maximum of \$5.50 per day for all conditions, including pregnancy, requiring hospital care except as hereafter specified in Part III—"Limitations on Hospital Service."

2. The following extra services without charge to patient:

- (a) Operating and delivery room, as often as needed.
- (b) All ordinary medicines and surgical dressings.
- (c) All laboratory examinations.
- (d) Basal metabolism tests.
- (e) Oxygen and serums.
- (f) Physical therapy.
- (g) Electrocardiogram.
- (h) X-rays, except x-ray and radium therapy.

III. LIMITATIONS ON HOSPITAL SERVICE:

1. Any hospital service not specifically mentioned in this plan is not insured.

2. No hospital shall be obliged to admit patients having diseases of a nature which that hospital does not ordinarily accept for treatment.

3. Mental and tuberculous cases shall be covered for the first admission only to a hospital occurring after the effective date of this plan.

IV. NUMBER OF DAYS COVERED:

Up to but not exceeding forty-five (45) days for any one admission.

V. SPECIAL UNDERWRITING CONDITIONS:

Every policy issued to conform to the requirements of this plan must provide, among other things not inconsistent therewith, for

1. The minimum hospital service specified in this plan.

2. The payment of policy proceeds directly to the hospital furnishing services unless the insured presents to the insurer satisfactory evidence of payment to the hospital for such services.

3. An option to the insured, if he leaves his place of employment, to continue the full policy protection for himself and his dependents specified above by payment in advance of the annual premium, in at least quarterly installments, and at the same rate as then in force, directly to the insurer.

4. The exclusion from policy benefits of treatment in any institution not an approved hospital as defined in this plan.

5. And may provide for the exclusion of hospital care for conditions already covered by Workmen's Compensation or other State, municipal or Federal laws.

VI. REQUIREMENTS FOR QUALIFICATION AS AN APPROVED INSURER:

To be accepted as an approved insurer each company or organization writing insurance to conform with this plan must:

1. Agree to insure any "employee" eligible hereunder upon application of the employer, provided application is for insurance of all eligible employees of such employer.

2. Agree to insure the spouse of each such employee and all unmarried children under 19 years of age on a voluntary basis.

3. Be licensed at the time of insuring by the State Department of Insurance to do business in the State of Rhode Island.

4. Furnish such reports as are required by the proper licensing authorities.

VII. REQUIREMENTS FOR QUALIFICATION AS AN APPROVED HOSPITAL:

An approved hospital is one which has been approved as a hospital by the American College of Surgeons, or the American Medical Association, or a State Hospital Licensing authority. Nursing homes, school infirmaries, convalescent homes and private sanatoria are not qualified as approved hospitals.

VIII. COST:

A responsible organization has agreed to furnish the benefits and under the conditions outlined above for the following rates:

- 1. For the employed person, 85c monthly.
- 2. For the employee's spouse and unmarried children under age 19, \$1.10 monthly.

EMERGENCY CALL!



MEDICS BAIL OUT TO AID CUT-OFF U.S. BATTALIONS

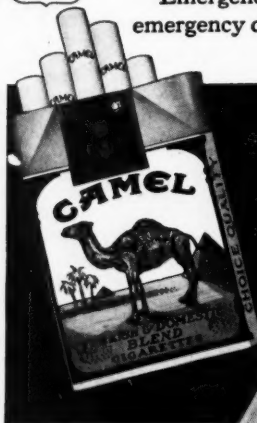
SUPREME HEADQUARTERS, Allied Expeditionary Forces — By parachute and by glider, Army surgeons went to the aid of the gallant garrison of beleaguered Bastogne.

The surrounded lost their only hospital in one of the first German attacks. With more than 800 wounded, the commanding officer radioed for medical aid. The response came immediately. Medics and medical supplies went in by parachute, by glider, and in Piper Cub planes.

FROM Bastogne to Leyte, the story is being repeated over and over again—of Army doctors, braving the battle hazards of the front line, risking *their* lives to save lives.

Emergency call? Every call is an emergency call to these *heroes in white*.

And with the Army doctor, as with the fighting men they care for, rest is often limited to a few moments of relaxation and a good cigarette. A Camel cigarette, more than likely, for Camels are the favorite with men in all the services, according to actual sales records.



CAMELS

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TOBACCOS**

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"FROM SOMEWHERE IN"

In the Philippines

WE received a lengthy and extremely interesting report from *Lt. A. J. Nadworny*, former Homeopathic hospital intern, relating his experiences in the Pacific theater of war. Relating his experiences in landing in the Philippines last December, Dr. Nadworny relates that "We were placed on a beach-head in a pouring rainstorm. The boys pitched their pup tents on the beach about 30 feet from the water's edge, but high tide came at night and washed much of the equipment out. For the first 3 or 4 days my medical chest consisted of what was in my first aid kit. When I moved up the beach about 15 miles I was able to set up a fairly good dispensary." After a few weeks in the Philippines Dr. Nadworny was shifted to the Netherlands East Indies, and here again he had to set up a new dispensary, with the work handicapped by the torrential rains. A brief service in this area was followed by a transfer back to the Philippines to replace a doctor returning to the States. The life of the country is described in great detail by the doctor who concluded his message with greetings to his many friends in Providence, particularly the medics at the Homeopathic hospital.

New Guinea

Captain Joseph Wittig, of West Warwick, reports our messages came as a "pleasant surprise down here in New Guinea because it shows a man that the Society is interested to keep tabs on him". After his indoctrination at Carlisle with Drs. John Donnelly and Charles Round, Dr. Wittig was assigned to Fitzsimmons General Hospital, and later to the General Hospital at Camp Crowder. He reached New Guinea last October where he met *Major Squillante* of Warren and *Major Vezina*, a Woonsocket dentist, "both of whom have seen plenty of action and have been decorated".

Also reporting from this area was *Captain Stanley T. Grzebien*, of Providence, who enlisted following his service at Rhode Island hospital in June of 1942. By September of that year he was in Australia with the First Evacuation Hospital, and later he moved with that unit to his present station where the group operates as a general hospital. Censorship regulations prohibited the relating of specific connections to military campaigns, but Dr. Grzebien reports that until recently (February 7) "we've had our fingers in most of the activity you have read about coming out of New Guinea and the nearby islands, and though we feel temporarily left out of the Philippines affair, we take comfort in the thoughts of our past 'laurels' in the days when we were amongst the American 'pioneers' of 'this lovely tropical paradise'."

The Mariana Islands

"Yes, my R. I. MEDICAL JOURNALS are coming through regularly now for which I am very grateful", reports Navy *Lieut. Frederic W. Ripley, Jr.*, of Edgewood, who was associated with Drs. Brackett and Buxton prior to his enlistment. After preliminary training last summer under Marine instructors in amphibious landings and operations, Dr. Ripley was transferred to the West Coast in September and was soon transported into the Pacific war zone, where "there are any number of medical and surgical cases to keep us all on the go". Commenting on his present base Dr. Ripley states "the island has a lot of natural beauty. It is very hilly with the highest elevation about 1500 feet. The vegetation is semi-tropical and very green. There is a goodly amount of lava and coral. I expect it will be a long time before I see ice and snow again." (Your Editor only wishes that some of the ice and snow that has glutted Waterman and Angell streets this winter might be trans-

continued on page 201



Although modern, scientific laboratory control does not prevent mistakes from happening, it *does* afford quick identification and prompt correction.

H. P. HOOD & SONS

DOCTORS AT WAR

continued from page 199

ferred to the Marianas for his as well as Dr. Ripley's benefit.)

The Palau Islands

We were much concerned when *Captain Richard Rice*, son of the superintendent of the State Infirmary, informed us that he has not been receiving the JOURNAL, until we noted that he has a new APO number which was not available to us. We can only hope that the copies of the JOURNAL that have been going out these past months to Dr. Rice have met a better fate than that of paper salvage at some postal depot.

After graduation from the School of Aviation Medicine Dr. Rice left for overseas a year ago last January, and in June, 1944, he was rated a Flight Surgeon which requires a minimum time of four hours a month in the air, but not with combat missions. He is with a famous heavy bombardment group which was in New Guinea first, then "moved to the Netherlands East Indies and are now in the Palaus—on the road to Tokyo" states Dr. Rice, who also adds that included among other duties of a flight surgeon are "constant supervision of sanitary installations, ambulance duty on the flying line, and knowing all of the fliers as intimately as possible so that we can spot any early change in their personalities, habits, moods, etc. and in this manner spot a beginning case of flying fatigue. The job is quite interesting, but, of course, we are all looking forward to getting back to civilian life and private practice."

At Sea

Lieut. John P. Hogan, USNR, of Providence, whose pre-service experiences include a year in Iceland as physician for a major construction company and a rescue from the U.S.S. Wakefield, formerly the Manhattan, which burned in mid-Atlantic in 1942, comes news of extended ship travel across the wide Pacific. After fifteen and a half months in the Seabees in the Central Pacific, Dr. Hogan was assigned to an invasion transport which has participated in every major Pacific invasion, including the initial invasion of Leyte Island. Commenting on his travels he reports "I flew thousands of miles over the Pacific, landing in such places as Johnson Island, the Marshall Islands, and the Admiralty Islands. Other places I could mention are censored. While I was in the Admiralties I met a very good friend and former classmate at Providence College, *Dr. Fred Cuddy* (of Cranston) a dentist. Not long ago I met Lt. Col. James B. Moran who was a fellow intern at St. Joseph's hospital with me".

continued on page 203

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the protective, soothing, anti-pruritic cream that aids healing

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Puretest Plenamins are economically packaged in amber and black capsules and are available in quantities of 72, 144 and 288 to the box. One amber and one black capsule supply the following essential vitamins:

Vitamin A.....5,000 U.S.P. Units

Vitamin D.....1,000 U.S.P. Units

Vitamin B₁.....666 U.S.P. Units

Vitamin C.....50 mg., 1,000 U.S.P. Units

Vitamin E.....Alpha Tocopherol, 1 mg.

Vitamin G (B₂).....2 milligrams

Vitamin B₆.....50 micrograms

Niacinamide.....20 milligrams

Calcium Pantothenate.....1 milligram

Liver Concentrate (1:20).....2 grains

Ferrous Sulfate.....1 grain

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DOCTORS AT WAR

continued from page 201

From shipboard in the Pacific *Lt. Comdr. Cecil J. Metcalf*, of Providence reports that he left Panama in December 1943, and for the ensuing eleven months was at Great Lakes Naval Training Center before exploring the wide stretches of the Pacific from a warship. Also at sea is *Lt. Reginald A. Allen*, of Providence, who was formerly stationed in Washington, D. C.

Our search for *Comdr. W. A. Stoops* of Newport has been completed with a communication from him relating that he had left Newport Naval hospital a year ago after three years of service there, and he is now with a hospital unit which landed with the forces that occupied Eniwetok in the Marshall Islands. Later he was assigned as Senior Medical Officer on a ship in constant contact with the fighting ships in the forward area and which acts as an auxiliary hospital in the care and evacuation of casualties.

BOOK REVIEW

THE MARIHUANA PROBLEM IN THE CITY OF N. Y., Jacques Cattell Press

About six years ago Mayor La Guardia heard that the use of marihuana was a serious problem in New York City. So he did the routine thing for these days. He hung it on the doctors.

The Academy of Medicine was asked to handle the problem. So some fifteen doctors and a number of police, male and female (the latter undoubtedly were on pay, there is no evidence of the doctors being so) made the investigation of which this is the report.

Marihuana or hashish comes from Indian hemp and has been used as a drug for centuries but only recently to much extent in this country. It has been dropped from the U. S. P. for twenty years and apparently its pharmacological value is infinitesimal. Its use is said to be common in school children. A great deal of investigation unearthed a small amount of this among children who apparently were of an exceedingly low type anyway.

The investigators evidently did not find a large number of users among adults and these were types that reminded us of Dr. McDonald's remarks about "banana men" at the start of prohibition. "They were probably better in liquor than out."

It seems that the technique of keeping "high," that is, in a euphoric state is difficult. If the user goes beyond this he gets decidedly disagreeable results. The practice does not lead to addiction in the medical use of the term.

We get the impression that this whole thing is a tempest in a tea pot. Only burns use the stuff and not many of them.

If one has an earnest interest in marihuana this book seems like an authoritative source.

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are a thing of the Past*Early 19th Century Fashion*But the years have added to
Johnnie Walker's popularity

More in style than ever . . . that's popular Johnnie Walker. For a smoothness and mellowness that's unsurpassed . . . treat yourself to this choice scotch whisky.



Popular Johnnie Walker can't be everywhere all the time these days. If occasionally he is "out" when you call . . . call again.

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- Decongestion of the nasal airway is promptly achieved by topical application of Neo-Synephrine, without causing wakefulness. Neo-Synephrine exerts prolonged local vasoconstriction and is virtually free from undesirable systemic effects such as elevation of blood pressure, increase of heart rate, and central nervous system stimulation.

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DISTRICT SOCIETY MEETINGS

PROVIDENCE MEDICAL ASSOCIATION

The February meeting of the Providence Medical Association was held at the Medical Library Building on February 5, 1945 at 8:30 P. M. as a joint meeting with the Rhode Island Medical Society. Dr. Elihu S. Wing, President of the Rhode Island Medical Society, and Dr. B. Earl Clarke, President of the Providence Association, divided the work of presiding at the meeting. All business was dispensed with.

Mr. Frederic Barnes, representing the Providence City Council Permanent Committee, awarded the first Charles V. Chapin medal to Dr. Reginald Fitz of Boston. Dr. Fitz delivered the first Chas. V. Chapin memorial lecture to the Rhode Island Medical Society at its annual meeting in 1944. The medal had not been struck at that time so that its presentation was delayed until this meeting.

Dr. Charles Janeway, a member of the staff of the Children's Hospital, Boston, delivered a concise talk on the practical aspects of the treatment of shock. He presented a simple diagram showing the interchange of body fluid from one so-called compartment to the other. The diagram delineated the absorption from the intestine into the blood plasma and the return of the fluid to the intestine from the plasma, the interchange with the interstitial fluid and the intracellular fluid and the excretion from the body by kidney, lung, skin and bowel. The matter of posture, of combating infection and hemorrhage and maintaining nutrition were all considered. Replacement therapy by means of whole blood, plasma, human albumin and other fluids was taken up. This presentation fitted in excellently with the program which took up the rest of the evening.

Drs. Donald B. Wells, John C. Leonard, Ralph E. Kendall, and Maurice T. Root of Hartford talked to us concerning the lessons learned in the treatment of burns from the Hartford circus disaster. Before their talks there were some colored movies shown which had been taken of the circus fire by R. L. Onorato of Plainfield, Connecticut. Mr. Onorato was present at the circus and after escaping from the tent took very excellent movies showing the spectacular and disastrous fire.

Dr. Wells spoke of the organization necessary in order to be ready to handle such a grave emergency situation as confronted them at Hartford and particularly at the Hartford Hospital. He told

in detail of the extensive preparations which had been made in cooperation with a citizen's committee and particularly of their preparations at the hospital in order to handle the situation. All patients admitted for treatment of burns following the fire were placed in the same wards together and all received uniform treatment. This simplified the problem of caring for them and resulted in greater benefits to the patients themselves. At the Hartford Hospital they had no deaths from burn shock. Of the 54 burned individuals who were admitted to the hospital for treatment, 3 died. The method of dressing burns was outlined in some detail. The objectives desired are the prevention of contamination, the checking of capillary leakage in frequent checking of dressings, immobilization of burned parts, etc.

Dr. Kendall spoke of the laboratory work involved in checking accurately on the condition of individuals in shock or threatened with shock following burning. The only adequate method in ascertaining what treatment in the way of replacement therapy may be necessary is by frequent blood examination.

Dr. Leonard told of the medical care of their patients. The routine administration of sulfadiazine was omitted after three days because of certain dangers encountered. Forty-five patients were given penicillin, mostly intramuscularly. High amounts of ascorbic acid were given in conjunction with skin grafting. Anemia and hypoproteinemia were combated by feeding the patients a diet very high in proteins. A mixture of amino acids and polypeptids was given to some patients. Diets up to 300 Gm. of protein and up to 3500 calories (in one case 5700 calories) were required. Several elderly patients were saved by tube feeding of such a diet.

Dr. Root spoke on *esprit de corps* in catastrophe. He outlined the cooperation and planning necessary on the part of doctors, nurses, internes and other hospital help in keeping up the morale of everyone concerned. He also spoke of the good work done by Social Service in handling family situations which developed.

The meeting adjourned at 10:30 P. M.

Collation was served.

Attendance 135.

FRANK W. DIMMITT, *Secretary*

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PROVIDENCE MEDICAL ASSOCIATION

Annual Reports of Committees for 1944

ANNUAL REPORT OF THE SECRETARY

Providence Medical Association, January 8, 1945

In 1944 the Providence Medical Association attained its highest membership enrollment in its history, registering a total of 566 members of whom 162 are in service with the armed forces of the United States.

During the year the Association held eight regular meetings, two of which were joint meetings, one with the Rhode Island Medical Society in February, and one with the Children's Heart Association in May. Sixteen members and seven non-members contributed to the scientific programs at these meetings. The average attendance at the meetings during the year was 96.

Nine members were elected to active membership, and one former member was re-instated to active membership. Eight members died during the year, as follows:

George R. Mankis (January 23)
William R. McGuirk (March 12)
William B. Cutts (May 24)
Nathaniel H. Gifford (May 25)
George A. Matteson (September 30)
Albert A. Barrows (October 9)
Jerome J. McCaffrey (October 16)
Robert S. Phillips (October 23)

The Executive Committee has met regularly to conduct the business of the Association and to take active leadership in all matters of interest to the profession. The minutes of all meetings of the Association have been published in the RHODE ISLAND MEDICAL JOURNAL.

Close contact has been maintained through the executive office with members serving with the armed forces, and on numerous occasions assistance has been rendered the families of such members. A record is being maintained of the war participation of all members of the Association, both those in active service and those engaged in war-connected duties here at home.

At Christmas a special greeting was sent to each of our members in military service with the following message:

To our Members Serving with the Armed Forces

Once again Christmas and the dawn of a new year finds you away from your home in defense of our Country. Once again we send you our sincere greetings at this Holy season, and our fond hopes for your return in 1945. We are all proud of your work in caring for the armed forces. We pledge you our complete support in the re-establishing of your practice here when peace again reigns in the world. God grant you continued good health and safety in your heroic labors.

THE PROVIDENCE MEDICAL ASSOCIATION

Respectfully submitted:

FRANK W. DIMMITT, M.D., Secretary

ETHICS AND DEPARTMENT

The Committee on Ethics and Department has not received any complaints against any members during the year, nor have any threatened liability suits been presented. The Committee reminds all members that every instance of a threatened suit should be reported immediately to the chairman of the committee, and a complete report filed at the executive office.

HARRY C. MESSINGER, M.D., *Chairman*
WILLIAM S. STREKER, M.D.
JOHN G. WALSH, M.D.
LOUIS I. KRAMER, M.D.
RUSSELL R. HUNT, M.D.
ANDREW MAHONEY, M.D.
ANTHONY CORVESE, M.D.

ADVISORY COMMITTEE TO BUREAU FOR HANDICAPPED

There have been no meetings of the full committee during 1944 although the opinion of members has been sought by telephone on occasion. The chairman has completed for the bureau papers which required the signature of a physician, has advised the Executive Committee of the bureau on a number of matters involving ethics, and has attended several meetings of the same committee.

CLIFTON B. LEECH, M.D., *Chairman*
G. EDWARD CRANE, M.D.
GORDON J. MCCURDY, M.D.
RAYMOND F. HACKING, M.D.
WILLIAM A. HORAN, M.D.
HERBERT E. HARRIS, M.D.
PETER F. HARRINGTON, M.D.
JOHN E. DONLEY, M.D.
WILLIAM P. BUFFUM, M.D.

ENTERTAINMENT

The Committee on Entertainment has had an inactive year. The inactivity has been due to the fact that so many of our members are in the armed forces and also because those who have remained behind have been too hard pressed for time to sponsor an annual dinner or golf tournaments.

ANTHONY V. MIGLIACCIO, M.D., *Chairman*
NATHAN A. BOLOTOW, M.D.
RICHARD F. MCCOART, M.D.
FRANK J. HONAN, M.D.
EDWARD F. BURKE, M.D.

NURSING

The Medical Nursing Advisory Committee had no occasion to meet this year, Miss Nellie Dillon, the Director of the District Nursing Association, having no problems to solve.

The advice and counsel of your Committee has frequently been sought in the past by members of this organization, a happy contribution to the solution of many prob-

continued on page 209

3 ADVANTAGES OF

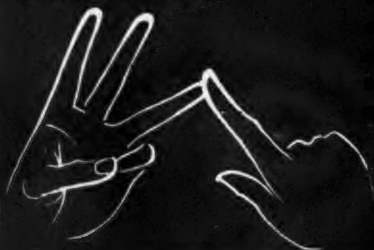
1. PROLONGED VASOCONSTRICTION



2. SMALL DOSAGE



3. PHYSIOLOGICAL RATIONALE



PRIVINE Hydrochloride

ANNUAL REPORTS

continued from page 207

lems of an allied profession and a token of respect in the field of service to our patients. It is a wholesome arrangement and mutually appreciated by both associations. The gratitude of the medical profession for the many favors extended to its members is hereby acknowledged and subscribed.

WILLIAM HINDLE, M.D., *Chairman*
JOHN C. HAM, M.D.
JOHN G. WALSH, M.D.
CHARLES BRADLEY, M.D.
HENRY E. UTTER, M.D.

LEGISLATION

The Committee on Legislation has met jointly with the State Medical Society's Committee on Public Laws, and in this manner has contributed immeasurably to the study of all proposed health legislation, both federal and state. The report, therefore, of the committee of the State Medical Society's committee may also be considered the report of the legislation committee of this Association.

WILLIAM H. FOLEY, M.D., *Chairman*
LEWIS B. PORTER, M.D.
HERMAN C. PITTS, M.D.
HENRY E. UTTER, M.D.
EMERY M. PORTER, M.D.
ALBERT H. JACKVONY, M.D.

PRE-SCHOOL EXAMINATIONS

There have been no regular meetings of the Pre-School Committee but Dr. Lewis as usual has been the most faithful medical member and has seen to it that Pre-School examination forms were distributed through the Health Department, Parent Teachers Association, and the School Department.

The physicians have been so busy that it has been impossible to hold as many clinics as in previous years and there also has been a decrease in the number of examinations in the doctors' offices due to the inability of physicians to handle these Pre-School examinations because of the call on their services for those children who have been sick.

Mrs. E. Gardner Jacobs, Health Chairman of the Rhode Island Congress of Parents and Teachers has tried very hard to stimulate the interest in Pre-School examinations both in the State and City by urging an expansion of the Pre-School Census and additional units have registered to conduct this census but not in anything like the number they had hoped for.

Dr. Lewis reports on the number of Pre-School forms received from parents of children entering, as follows: 1940-41—351; 1941-42—363; 1942-43—264; 1943-44—139.

ROBERT M. LORD, M.D., *Chairman*
MICHAEL J. NESTOR, M.D.
HAROLD G. CALDER, M.D.
CHARLES B. LEWIS, M.D.
FRANCIS V. CORRIGAN, M.D.
MERLE M. POTTER, M.D.

READING ROOM *

As in the past, the Reading Room Committee has authorized the expenditure by the Association of the purchase of the outstanding Journals for use by members at the Medical Library of the State Medical Society. The Committee at this time calls to the attention of the membership this excellent reference file of medical periodicals and urges that more members of the Association avail themselves of the valuable literature available.

JOHN A. HAYWARD, M.D., *Chairman*
THOMAS F. SCANLON, M.D.
ROCCO ABBATE, M.D.

continued on page 216

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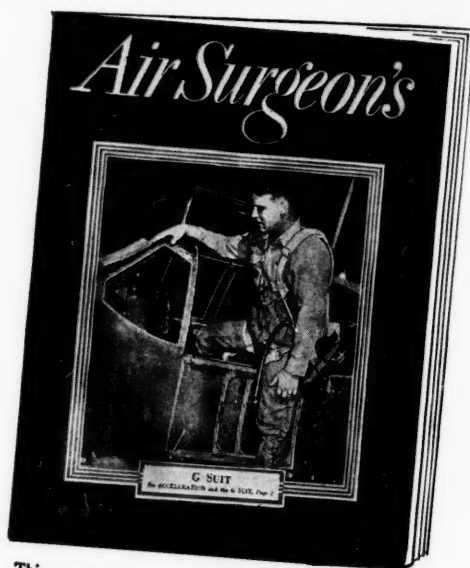
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CALIFORNIA HEALTH INSURANCE PROGRAMS

Although the California legislature has apparently been deluged with health insurance proposals following the announcement early in the year by Governor Earl Warren that he would have introduced a compulsory health insurance measure, the final battle for disposition of the acts will undoubtedly center about the Governor's bill and the counter proposal made by the California Medical Association.

Governor Warren's plan for prepaid medical care or "compulsory insurance" is reported to call for a 1½% payroll deduction taken from both employer and employee, against a maximum of \$4,000 salary yearly. The system would go into effect in 1947, and everyone covered by unemployment insurance would go into the prepaid medical care system automatically, and those not covered would be urged to come in on a voluntary basis. Everyone in the family of the worker would be entitled to medical care, not merely the member from whose check the contribution is taken.

Service would be on a "fixed fee" basis, so much per call at home, or office, so much for various types of treatment, and so on through minor and major operations. Hospital charges would be included in the benefits under the system.

The California Medical Association's bill would establish a system of social sickness insurance both within and as a supplement to the system of unemployment insurance (similar to the R. I. Sickness Compensation plan) and would also provide for a system of encouragement of non-profit medical, surgical or hospital periodical payment plans.

As California, like Rhode Island, is one of four states in the country that has exacted an employee contribution to the unemployment compensation fund, it is highly possible that the sickness compensation plan may be the one to get the most support in the final debate of the problem before the present legislature, unless the entire matter is subjected to a public referendum. The present

California Unemployment tax consists of 3.7% of all payrolls, 2.7% paid by the employer and 1% by the employee, and with a present surplus in the fund of more than \$620 million it would appear that the employee tax might be diverted as was the case here.

DELOUSED!

In a radio talk January 28 on the insecticidal properties of DDT compositions Lt. Col. A. L. Ahnfeldt, director of the Sanitation and Hygiene Division, Preventive Medicine Service, office of the Surgeon General of the U. S. Army, is reported to have related that "in 1942 the Surgeon General's Office first saw the potentialities of DDT . . . Two medical officers were taking some DDT powder to an isolated detachment of our troops. They were captured by some Bedouins and taken before their chief. It was a pretty tight spot. In desperation they told the chief that they were carrying a magic powder. The chief wanted to see it so the medical officers dusted his robes with DDT. The Americans said that in a few minutes the chief relaxed and smiled and the next day set them free . . . For the first time in that chief's life he had enjoyed a good night's sleep."

DENTAL NEEDS OF RETURNED SOLDIERS

A redistribution station in this country, where soldiers just returned from overseas receive dental treatment, has reported to the Office of the Surgeon General that about one man in ten needs an extraction or other emergency treatment. This includes the construction of a denture if the man hasn't enough teeth to chew an average meal. According to this report, about forty-five per cent of the men returning from overseas need one or more fillings while about forty per cent do not require any dental treatment. Figures previously released by the Dental Division, Office of the Surgeon General, show that about one man in every four requires emergency dental treatment at the time of induction.

continued on next page

FLOOD EMERGENCY

The unusually heavy snowfall of the past winter is the occasion for much concern in various parts of the country in view of the possibility of Spring floods. In Pittsburgh, scene of disasters from such a cause in previous years, the Allegheny County Medical Society has made arrangements for volunteers to care for sick and injured in the flooded districts, if any. The plan is to proceed according to the Civilian Defense program.

SURPLUS MEDICAL SUPPLIES

In a speech recorded in the Congressional Record (February 16) Hon. A. L. Miller of Nebraska called attention to a listing in the Surplus Reporter of February 3 of some 344 articles of a medical and surgical nature which were scheduled to go on sale after February 19. In checking over the Surplus Property Reporter the Nebraska Congressman noted among the items "53,657 surgical knives, 36,881 surgical forceps, 27,004 sterilizing instruments, 19,995 pairs of surgical scissors, 1,536,000 tablets of procaine, 51,150,000 tablets of laxatives of various types, 1,200,000 tablets of strychnine sulfate, 95,954 pints of aromatic spirits of ammonia, 28,687 pounds of zinc oxide, 28,300,000 first aid surgical dressings, 50,000 tubes of surgical catgut, 7,292 surgical masks, 44,875 pounds of ichthyol."

PENICILLIN FOR CIVILIANS

Representatives of the Chemicals Bureau of the WPB informed the Penicillin Producers Industry Advisory Committee at a recent meeting that as the supply of penicillin improves it may be possible to ease controls on the civilian distribution of the drug. A 20% increase in monthly quotas of penicillin for more than 2,700 depot hospitals has been in effect since February 1. Production in January this year was 330 billion units as compared with 12½ billion units in January, 1944.

RHODE ISLAND MEDICAL JOURNAL SICKNESS COMPENSATION LEGISLATION

Ben Read, writing in the WASHINGTON LETTER, release of the United Public Health League, recently reported that "eleven states have introduced bills to permit Sickness Compensation, and most of them are sponsored by labor." Rhode Island's experiment should be carefully studied by these states if they would avoid some of the complications which now trouble us.

DENTAL CARE FOR CHILDREN

Dr. Martha M. Eliot, associate chief of the Children's Bureau in the Department of Labor has advocated that if care for all children cannot be provided then a good basis program would be to take care of at least those in the six-to-twelve-year-old group. "Forseeably," Dr. Eliot is reported as saying, "if we took good care of the school population, year after year, little more than maintenance dental care would in time be needed for the adult population. Caring for children first is the most economical and most sound method of reaching the ultimate goal of care for all."

MEDICAL COLLEGE FOR JERSEY

What is reported as the first medical college in New Jersey opened its doors in January when the Essex College of Medicine and Surgery started its first classes in Newark with eighty-one students after more than two years of preliminary planning. The college will seek a license to confer the degree of medicine from the State Board of Education after it has been in operation some time. Headed by Dr. A. M. Koch, a psychologist who formerly worked with Dr. Alexis Carrel at the Rockefeller Institute, the college supplants the Essex Junior College now out of existence. The equipment of Oglethorpe University (Georgia) which closed after a three year span was recently purchased by the Jersey college and transported to Newark.



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TEMPORARY DISABILITY

Abstracted from SOCIAL SECURITY, a Statement by the Social Security Committees of American Life Convention and the Life Insurance Association of America, and the National Association of Life Underwriters, Published in February, 1945.

PROPOSALS have been made to extend unemployment compensation to cover temporary total disability, paralleling similar proposals to extend old-age and survivors insurance to cover permanent total disability. Short-term and long-term disability are two different problems, economically speaking, and require different treatment."

* * * * *

"In considering such proposals, it is sometimes assumed that the risk of disability is evenly enough distributed so as not to raise questions concerning the appropriateness of a uniform plan of benefits supported by a single rate of tax. The facts are quite different. Many factors and conditions, some of which might appear to an inexperienced person to be of minor importance, play a major role in determining the rate of claim under an accident and sickness insurance plan, and cause it to vary widely for different employee groups. Some of these factors are of a managerial and administrative nature, closely connected with problems of health and absenteeism among workers. They influence the rate of reported disability in such a way that it depends not only upon the underlying rate of accident and sickness, but also upon the existence and design of the plan of coverage for each particular group of employees.

"Among the factors that materially affect the rate of temporary disability among employed workers are:

(a) The proportion of women, especially married women.

Under normal conditions, the average rate of disability among women is from one and one-half to two times that of men. This high rate has recently been increased by the more widespread employment of married women, who often have to carry a load of domestic duties and worries in addition to their paid employment, and who may also make claim for maternity benefits if the plan of coverage so provides.

(b) The length of the work week.

If overtime work is involved, not only is the physical strain obviously greater, but larger pay envelopes permit the accumulation of personal reserves which may reduce the incentive for continuing work with a borderline ailment.

(c) Standards of employment.

At current high levels of employment, many marginal workers in relatively poor health have jobs they would not be able to get, or to hold, during more normal times.

"Other factors which have little or no influence on the actual rate of non-occupational accident and sickness, do greatly affect the rate of claiming benefit. Some of these are:

(a) The waiting period between the date the employee ceases work because of disability and the first day for which benefits are payable.

Experience has shown that if one group of employees may claim benefits after, say 3 days of disability, but another only after 7 days of disability, the former group will not only be eligible for benefits for the extra 4 days but will claim at a greater rate even after the 7th day. This, parenthetically, does not support the theory sometimes propounded that early benefit payments for minor sicknesses will reduce the claim load of longer disabilities. Statistics also indicate a much higher rate of disability if benefits are paid retroactively at the end of the waiting period.

(b) The ratio of benefits to wages.

The higher this ratio, the greater is the rate of claim. If, further, a person receiving sickness benefits also receives all or part of his or her regular earnings, an unfavorable experience will almost invariably result.

(c) The length of time between the date an individual becomes employed and the date he becomes insured.

In many industries there need be no probationary period before insurance is available to a new employee, at least in normal times. In others, however, immediate coverage on becoming employed not only would provide insurance on casual workers in low states of health, but would attract applications for employment from disabled unemployables seeking sick benefits.

(d) Employer personnel policy and the attitude of the worker towards his job.

These factors vary widely between different establishments, with greater effect upon the rate of claiming benefit. Many employers, including

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TEMPORARY DISABILITY

continued from preceding page

some of the largest, have made elaborate provision for the health and well-being of their employees. The financial incentives provided through experience rating under voluntary private plans also have a definite good effect on the rate of claim.

(e) Claim administration.

The ease with which a claim may be made, and the degree of intelligence displayed in passing on it, distinctly affect the rate of claiming. Some types of claims are particularly difficult to handle, such as those for nervous exhaustion, subjective ailments as a pain in the back or a "tired feeling", claims with inadequate or conflicting diagnoses, and cases where the claim is filed after return to work.

"The foregoing factors clearly indicate the complexity of coverage for temporary disability due to non-occupational accident or sickness. . . ."

ANNUAL REPORTS

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TUBERCULOSIS

Your Committee has had four meetings this winter and spring, all in conjunction with the Committee on Tuberculosis of the Rhode Island Medical Society. There have been three chief topics of consideration. One, promotion of the use of the mobile x-ray unit of the Providence Tuberculosis League, two, the follow-up of cases of tuberculosis of residents of Providence discovered at the Induction Center, three, follow-up of similar cases elsewhere in the State.

A complete report of the work of this joint committee has been published as the report of the Tuberculosis Committee of the State Medical Society, and therefore it is not reprinted at this time.

JOHN C. HAM, M.D., *Chairman*, U. E. ZAMBARANO, M.D., PHILIP BATCHELDER, M.D., JOHN I. PINCKNEY, M.D., PETER F. HARRINGTON, M.D., FLORENCE M. ROSS, M.D., JAMES P. DEERY, M.D.

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RHODE ISLAND MEDICAL JOURNAL

EVALUATION OF LIVER FUNCTION TESTS

The diverse functions of the liver were stressed and the enormous reserve of liver function noted. It is small wonder that numerous tests have been proposed to measure liver function and it is conceivable that function, as measured by these tests, and the appearance of the liver in stained sections, will not always correlate.

An experience with 10,000 icteric indices and qualitative van den Bergh reactions, 200 quantitative van den Berghs, 2,000 blood cholesterols, 2,000 protein determinations and 200 protein fractionations by chemical means, 300 Takata-Ara reactions, 400 cephalin-cholesterol flocculations, 315 very low blood urea nitrogens, many blood sugars, 50 alkaline phosphatases in blood, 250 prothrombin time estimations, 350 urine urobilinogens, many qualitative tests for bile in urine and bile and stercobilinogen in feces, examination of 100 urine sediments for amino acid crystals, 800 hippuric acid excretions, 200 galactose tolerance tests, has led to the following conclusions:

1. Differential diagnosis can be aided and the progress of liver disease followed by repeated determination of blood icteric index and cholesterol, tests for bile and urobilinogen in urine and bile in feces, and determination of the hippuric acid excretion.

2. Plasma protein and prothrombin time studies have special uses to explain peripheral edema, and to indicate and follow vitamin K therapy.

3. The galactose excretion, fecal urobilinogen (stercobilinogen), urinary amino acid crystals, and blood van den Bergh, alkaline phosphatase, flocculation tests, urea N and glucose, are of much less value to follow abnormal liver function.

... Abstract of paper by this title given before the Brown University Department of Medical Sciences, February 2, 1945, by Russel O. Bowman, Ph.D., of Rhode Island Hospital.

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